

THE  
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OCTOBER, 1873.

THE TWENTY-FIRST ANNUAL MEETING OF THE AMERICAN  
PHARMACEUTICAL ASSOCIATION.

This meeting commenced on the afternoon of Tuesday, September 16th, in the Virginia Opera House, located on Ninth street, opposite the Capitol Grounds at Richmond, and closed, with the fifth session, shortly after noon on Friday, September 19th. The hall, spacious without being too large, was well adapted for the purposes of the meeting. The exhibition was held in the supper-room, located in the high basement beneath the hall wherein the meeting was held, and was much more extensive than had been at first-anticipated.

*First Session—Tuesday Afternoon.*

Shortly after three o'clock the meeting was called to order by the President, Mr. Albert E. Ebert, of Chicago, who congratulated the members upon the happy auspices under which they were permitted to reassemble, and called attention to the pleasing coincidence that, at this moment, the British Pharmaceutical Conference was in session at Bradford, England, and the Austrian Apothecaries' Association, at Vienna. He had this day received from the former the following kindly message :

BRADFORD, ENG., September 16, 1873.

*To the President of the American Pharmaceutical Association,  
at Richmond, Va., U. S. A. :*

Our members send hearty fraternal greetings to yours.

THE PRESIDENT

*Of the British Pharmaceutical Conference, at Bradford.*

To which he had sent the following reply :

RICHMOND, VA., September 16, 1873.

*To the President of the British Pharmaceutical Conference,  
at Bradford, England;*

We return your fraternal greetings.

THE PRESIDENT

*Of the American Pharmaceutical Conference.*

The President then introduced to the meeting Hon. A. M. Keiley, Mayor of the City of Richmond, who, in a brilliant and happy speech, extended to the members of the Association and their ladies a most hearty welcome and cordial greeting. The frequent applause and, at the conclusion of the speech, the hearty cheers testified how well his remarks had been appreciated by those present. The President replied briefly, expressing the thanks of the Association for the hospitable reception.

A Committee of Credentials was appointed by the chair, as follows: Prof. Procter, of Philadelphia; Geo. Leis, of Lawrence, Kansas; and Prof. G. F. H. Markoe, of Boston; which Committee subsequently reported delegates from the following Associations, duly accredited to the meeting, viz.: the Massachusetts, New York, Philadelphia, Maryland, National (of Washington, D. C.), Louisville, Chicago, and Tennessee Colleges of Pharmacy, the New Jersey, Newark, Mississippi State, and East Saginaw Pharmaceutical Associations, the Alumni Associations of the Massachusetts, New York, Philadelphia, and Maryland Colleges of Pharmacy, and the Literary and Scientific Society of the German Apothecaries of the City of New York.

At a subsequent session the Secretary handed in the credentials of the Cincinnati College of Pharmacy, which had been previously overlooked. The credentials of the Kansas College of Pharmacy, and of the Allegheny County Pharmaceutical Association, not having arrived, Mr. Geo. Leis, of the former, and Messrs. W. H. Brill and H. S. Lutz, of the latter Society, were invited to seats as delegates.

Mr. Balluff, from the Business Committee, reported resolutions inviting to seats upon the floor Professor Pratt, of Washington and Lee University, the members of the Faculty of the Virginia Medical College, and the Medical profession in general; also a resolution inviting the public to visit the exhibition on Wednesday evening, between the hours of 7½ and 9½ o'clock.

Dr. Menninger, on behalf of the Executive Committee, reported the names of 51 candidates for membership. Messrs. S. M. McCollin and E. C. Jones having been appointed tellers, the President was, on motion, directed to cast an affirmative ballot in favor of the candidates. An additional number of applicants for membership was soon after reported and likewise elected. At the first call of the roll 70 members were found to be present.

The following reports were handed in: Report of the Executive Committee with the report of the Permanent Secretary, of the Committees on the Progress of Pharmacy, on the Drug Market, on Papers and Queries, on Legislation, on Adulterations and Sophistications, on Arrangements for the Meeting of 1876, on Formulas for Elixirs, on the Editorship of the Report on the Progress of Pharmacy, and on the Photographic Album.

The amendments to the by-laws proposed at the Cleveland meeting were, after some discussion, adopted. One of these amendments defines the Societies which shall be entitled to representation at the annual meetings to be *all local organizations of pharmacists* (Art. vi, Chap. vi); the other directs the appointment of the Committee on Specimens to be made at the first session instead of at the second, as heretofore. The amendment to the Constitution lying over from the previous meeting, and relating to the creation of a sinking fund, was for the present postponed.

An invitation from the Young Men's Christian Association to visit their rooms and make use of their library, was received and directed to be properly acknowledged by the Secretary.

Prof. Procter read the report of the Committee on the Editorship of the Report on the Progress of Pharmacy; it recommends that the labor be entrusted to a salaried officer of the Association, to be called Reporter on the Progress of Pharmacy, proposes the necessary alterations of the Constitution and by-laws, and recommends the election of Prof. C. L. Diehl, of Louisville, Ky., to this position. The report was accepted and the proposed amendments adopted.

The following Committee to Nominate Officers for the ensuing year was appointed by the delegations named above: Messrs. G. F. H. Markoe, David Hays, Chas. Bullock, Lewis Dohme, Wm. S. Thompson, C. L. Diehl, A. E. Ebert, B. Lillard, R. Rickey, C. W. Badger, J. T. Buck, S. S. Garrigues, C. A. Tufts, H. C. Porter, H. A. Vogelbach, A. A. Kleinschmidt, Chas. Eimer, Geo. Leis and H.

S. Lutz. To this number the following were added by the President from the Association at large: Messrs. A. Boyd, Utica, O.; Wm. Heyser, Chambersburg, Pa.; A. S. Lee, Raleigh, N. C.; Wm. Vincent, Williamsburg, N. Y., and Chas. M. Helman, Cincinnati, O.

The reports of the Executive Committee and Permanent Secretary were read; the former reports the decease of the following active and honorary members: Prof. Edward Parrish, of Philadelphia; Kline C. Lineaweaver, of Washington, D. C.; T. W. Metcalf and W. E. Bayliss, of Brooklyn, N. Y.; Elias Durand, of Philadelphia; Prof. Dr. J. F. H. Ludwig, of Jena, and Dr. C. L. Arthur Casselmann, of St. Petersburg, Russia.

The report of the Secretary suggests that the Association grant permission to the pharmaceutical journals of this country to print the essays and volunteer reports in advance of the publication of the Proceedings. The incidental expenses during the year amounted to \$402.53 of which sum \$79.65 was for freight, and \$143.50 for postage. An editorial note, appended to page 280 of the last volume of Proceedings, was reported to be erroneous; the note which should be erased, occurs in the description of the process for assaying Seidlitz powders, as followed by Mr. C. W. Grassly, and is as follows:

The author does not state how he prevented the contamination of the precipitated sulphate of baryta with bitartrate of potassa, which must be precipitated after adding acetic and muriatic acids, except by heating the resulting liquid.

A letter from Mr. Jas. R. Mercein, of Jersey City, one of the members of the Committee on the Progress of Pharmacy for the Year 1871-72, was read, explaining that the portion of the annual report which he had agreed to furnish had been finished in due time, and that the Chairman of that Committee had been duly notified by him some time before the last meeting took place, but had failed to answer. It was then

*Resolved*, That Mr. Mercein be requested to present his report on the progress of pharmacy for the year 1871-72 to the Association.

Prof. Diehl offered to arrange, if necessary, the report of Mr. Mercein for publication, which was accepted by resolution.

The Chair appointed the following Committee on Specimens: Dr. A. W. Miller, of Philadelphia; M. L. M. Peixotto, of New York; Jos. L. Lemberger, of Lebanon, Pa.; G. J. Luhn, of Charleston, South Carolina; and David Hays, of New York. At the next session Mr. Peixotto was excused from serving on this Committee, and Mr. W. H. Scott, of Richmond, appointed in his place.



The Secretary laid before the Association two volumes of the Medical and Surgical History of the War of the Rebellion, received from the Surgeon General U. S. A., also one volume of the Report of Columbia Hospital for Women, and Lying-In Asylum, Washington, D. C. By J. Harry Thompson, A.M., M.D.

The President read his Annual Address, reviewing the labor of the Committees and making several important recommendations aiming at an increased usefulness of the Association. The address was well received, and referred to a committee of three, consisting of Messrs. Chas. Bullock, L. V. Heydenreich and Dr. E. P. Nichols. The Association then adjourned until 9 o'clock the following morning.

*Second Session—Wednesday Morning.*

After the reading and approval of the minutes of the first session the Nominating Committee recommended the election of the following officers for the ensuing year:

*President*, John F. Hancock, of Baltimore, Md.

*Vice-Presidents*, William Saunders, of London, Ontario

John T. Buck, of Jackson, Miss.

Paul Balluff, of New York.

*Treasurer*, Chas. A. Tufts, of Dover, N. H.

*Permanent Secretary*, John M. Maisch, of Philadelphia.

*Reporter on the Progress of Pharmacy*, C. Lewis Diehl, of Louisville, Ky.

*Executive Committee*, Thos. S. Wiegand, *chairman*, of Philadelphia; George Leis, of Lawrence, Kan.; Chas. L. Eberle, of Philadelphia; Henry J. Menninger, of Raleigh, N. C.; and John M. Maisch, *ex officio*.

*Committee on Drug Market*, P. W. Bedford, *chairman*, of New York; Wm. H. Brown, of Baltimore; Wm. P. Keffer, M.D., of New Orleans; Wm. H. Brill, of Pittsburg; and Wm. S. Merrell, of Cincinnati.

*Committee on Papers and Queries*, Jos. P. Remington, *chairman*, of Philadelphia; Lewis Dohme, of Baltimore; and Benj. Lillard, of Nashville, Tenn.

*Business Committee*, Edward P. Nichols, M.D., *chairman*, of Newark, N. J.; Joel S. Orne, of Cambridgeport, Mass.; and John F. Judge, of Cincinnati.

The report was accepted, and Messrs. Boyd and Hassencamp hav-

ing been appointed tellers, the President was directed to deposit an affirmative ballot for all the nominees. Professors Procter and Stabler were appointed a Committee to conduct the President elect to the chair; but Mr. John F. Hancock not being in the hall, the first Vice-President elect, Mr. Wm. Saunders, was invited to preside.

Dr. Tufts read the Annual Report of the Treasurer, which was accepted and referred to an Auditing Committee, to be appointed by the President.

There was a balance of over \$900 in the hands of the Treasurer at the beginning of the meeting.

The following letter was read:

SEPTEMBER 12, 1873.

*To the American Pharmaceutical Association:*

GENTLEMEN:—To further original investigation and to inaugurate a system of prizes by this Association to those who by study and application shall add to our knowledge of medicinal substances, I have the pleasure to present to this Association the enclosed sum (\$500) to be used in the following manner: The money to be properly invested by order of the Executive Committee, and the annual interest derived therefrom to be appropriated for conferring a suitable prize for the best essay or written contribution containing an original investigation of a medicinal substance, determining new properties or containing other meritorious contributions to knowledge, or for improved methods of determined merit for the preparation of chemical or pharmaceutical products. The prize to be awarded by a suitable committee within six months after the annual meeting at which the essays are presented for competition; provided that in case no one of the essays offered is of sufficient merit to justify the award, in the judgment of the committee, all may be rejected, and the sum added to that of the fund.

Respectfully,

ALBERT E. EBERT.

The gift was accepted with the thanks of the Association, and the President directed to appoint a committee of three to carry out the objects of the donor. This fund was, later in the session, directed to be called the *Ebert Fund*, and the prizes awarded from the proceeds thereof the *Ebert prize*, agreeable to a resolution offered by Mr. G. Leis.

The President elect, having arrived, took the chair after some appropriate remarks, and appointed Messrs. N. H. Jennings, of Baltimore; Benj. Stacey, of Cambridgeport; and T. Roberts Baker, of Richmond, a Committee to Audit the Treasurer's Accounts.

Propositions for membership were received and the applicants duly elected, Messrs. Hassencamp and Jones acting as tellers.

The report of the Committee on Adulteration and Sophistications

was read by Mr. Peixotto, accepted and referred. The report on the Progress of Pharmacy, read by Prof. Diehl, was ordered to take the same course. On motion, the sum of \$250 was directed to be paid to Prof. Diehl as a partial acknowledgement for his time and labor in voluntarily preparing this report.

Letters were read from Mr. W. G. R. Frayser and Messrs. C. R. Rees & Co., offering to prepare a photographic group picture of the members of the Association. The Secretary was directed to acknowledge both letters and inform the writers that their kind offers must be respectfully declined for want of time.

Prof. Diehl read the report of the Committee on Arrangements for the Meeting of 1876, which, after suggesting various measures for the celebration, recommends that the meeting of 1875 be held in the city of Boston, in order to have a full attendance and the better to arrange for the centennial.

The resignation of Mr. C. W. Grassly, of Chicago, was offered and read. This communication being deemed insulting to the officers and members of the Association, his resignation was rejected, and, on motion of Dr. Squibb, he was expelled, by a vote of 58 to 2, for using indecorous language to the Association and its officers.

Dr. Squibb read a volunteer paper on the buying and selling of alcohol, which was accepted and referred.

A Committee of three on the time and place of the next Annual Meeting was directed to be appointed; the President named Messrs. Joel S. Orne, R. H. Gardner and Louis Dohme to serve on this Committee.

The Association then went in a body to the exposition room, and afterwards adjourned until 3 o'clock, P. M.

### *Third Session—Wednesday Afternoon.*

The minutes of the previous session having been read and approved, the report of the Auditing Committee was read and accepted; the Committee found the accounts correct and the books in admirable order.

The salary of the Reporter on the Progress of Pharmacy was next considered, and on motion of Mr. Peixotto, seconded by Dr. Squibb, the By-Laws were so amended as to provide that he shall receive such sum for his report as shall be annually determined.

On motion, the regular order of business was postponed till the

following morning, and this afternoon session mainly devoted to the reading and discussion of papers.

Mr. H. N. Rittenhouse read a paper in answer to query 1, on a permanently flexible isinglass plaster. Mr. P. F. Lehlbach, in answer to No. 7, presented a paper on *Sapo mollis*, accompanied by some samples.

Dr. Squibb read a paper on rhubarb, and called particular attention to the fact that even the best rhubarb of commerce appeared to be losing that peculiar aromatic odor formerly so noticeable, and which he considered one of the most reliable tests of the root. He accounted for this by suggesting that artificial process of drying, forced production, &c., might be the causes. He submitted three boxes of specimens of the best chests that had been imported at New York the past year. On motion, this was accepted and referred for publication.

Dr. Squibb also read an essay on Physicians' Pocket-Cases, in which he described one of his own contrivance, provided with a minim liquid measure, or pipette, to draw the contents from the vials without dropping or pouring, and with more accuracy than by either of those processes. He presented specimens of the cases, &c., and announced that they could be made and used by any one who chose, as he did not propose to patent them.

The following letter was read by the Secretary :

RICHMOND, VA., Sept. 17, 1873.

To the Officers and Members of the American Pharmaceutical Association :

GENTLEMEN :—In behalf of the Pharmacists and Druggists of this city, I hereby extend to you a cordial invitation to participate with us in an excursion down James River, on the afternoon of Thursday, 18th inst., at 3 o'clock.

Very respectfully,

WM. H. SCOTT, Chairman Com of Arrangements.

Prof. Markoe, one of the members of the Pharmacopœia Committee, read an individual report, containing criticisms on the pharmacopœia, which was accepted and referred.

In answer to query 10, Mr. Bedford reported verbally that balsam of tolu cannot be emulsionized.

A partial answer to query 12, on the use of petroleum benzin for extracting oleoresinous drugs, was read by J. P. Remington, and the subject continued to him for another year.

A paper, by Mr. E. D. Chipman, on the proper proportions of sugar and honey in Vallet's mass, was read in answer to query 15

also one by Prof. Procter, on the value of orange-colored glass as a preventive of the chemical influence of light; this subject was continued for another year.

The following papers were read: by the Secretary, on query 21, in relation to the proper time for collecting biennial medicinal plants; by J. P. Remington, on cheap ointment boxes; by Prof. Procter, on query 24, on the preparation of cucumber ointment; by Dr. Pile, on improvements in graduated measures, and on query 28, on labelling shop furniture, etc., by G. H. Schafer.

In a voluntary paper, Mr. G. W. Kennedy informs that he has separated gentisic acid and gentiopierin from American columbo (*Frasera Walteri*).

Several new members were elected, Messrs. Kennedy and Lemberger acting as tellers.

The following letter was read by the Secretary:

RICHMOND, September 16, 187

*Prof. J. M. Maisch, Permanent Secretary of the American Pharmaceutical Association, in session at Richmond, Va.:*

DEAR SIR:—It affords me pleasure to be in position to offer an exchange of our society's publications as a partial expression of our high appreciation of the laudable objects for which your association is organized. You may feel assured that whatever you may do to elevate the standard of your profession and thereby discountenance quackery and dishonest imposition will meet with the hearty favor and cordial support of the community in which you are assembled, and especially of the Medical Society of Virginia.

Very respectfully yours, etc.,

LONDON B. EDWARDS,

*Recording Secretary Medical Society of Virginia.*

On motion, the proposed exchange was accepted, and the Secretary directed to notify Dr. Edwards.

The Association now adjourned until 9 o'clock the following morning.

*Fourth Session—Thursday Morning.*

After the minutes had been read and approved, Dr. Nichols presented the report of the Committee appointed at the first session, to consider the suggestions contained in the President's address and Secretary's report.

Some discussion ensued upon the recommendation of the report that the Executive Committee and Permanent Secretary be allowed a discretion in the publication in pharmaceutical journals or elsewhere of any essay or article read before the Association in advance



of the publication of the annual volume of transactions. Dr. Squibb moved to strike it out. Agreed to. The report, as amended, was then adopted.

The proposed amendment to the constitution to provide for a sinking fund, offered last year, was rejected.

After some discussion on the propriety of declining in advance for future meetings all invitations to excursions until the labors of the Association shall have been performed, the Committee on the next Annual Meeting presented their report, recommending the Twenty-second Annual Meeting to be held in the city of Louisville, on the second Tuesday in September, 1874. The report was received and adopted without a dissenting vote, and Prof. Emil Scheffer was, by acclamation, elected Local Secretary.

The reports of the Committees on Legislation and on the Photographic Album were read and the Committees discharged. The report of the Committee on Drug Market was read by Mr. Bedford, accepted and referred.

The President appointed the following Committee on Album: P. W. Bedford, of New York, Chairman; C. A. Tufts, of New Hampshire; R. J. Brown, of Kansas; J. P. Remington, of Philadelphia, and E. H. Sargent, of Chicago.

The President also announced the appointment of the following Committee on "Ebert prize:" Messrs. Charles Bullock, Wilson H. Pile and John M. Maisch, of Philadelphia.

Prof. Procter read a valuable essay on query 30, "What shall I read and where shall I begin?" Prof. Lillard a voluntary paper on homœopathic pharmacy, and Dr. Garrigues on American bromine production. The latter also exhibited oak galls collected by him near Huntington, W. Va. Dr. Squibb stated that galls from the oak and sumach had been used for making gallic acid.

The following papers were read: On poisons and the protection against their improper use, by C. L. Eberle; On the insect enemies of drugs, and On the Mexican honey ant, by William Saunders; On a general apparatus stand, etc., and On ergot and its preparations, by Dr. Squibb; On the proper alcohol strength of tincture of colombo, by C. L. Eberle; On the purity of commercial tartaric acid, by H. J. Rose. After some verbal remarks on under- and over-hydrated chloral, by Prof. Diehl, query 34 was dropped.

Mr. J. F. Hancock read the report of the Committee on Elixirs, etc., which was accepted and the Committee discharged. It was then

*Resolved*, That this report be adopted, with the recommendation that these formulas be used by members of the Association, and that the Secretary be instructed to send a printed copy of this report to the medical societies of the Union, with the suggestion that physicians, if prescribing elixirs at all, prescribe only such formulas as have been adopted by this Association.

*Resolved*, That Mr. J. F. Hancock be appointed the committee on unofficial formulas.

The delegates of all incorporated pharmaceutical societies not represented on the Committee on the Pharmacopœia, were requested to nominate one member for said Committee, and report at next session. After the election of new members, Messrs. R. W. Gardner and C. W. Badger having acted as tellers, the Committees on Adulterations and Sophistications, on Legislation, on Liquor Dealer's License of Apothecaries, and on Infringement of Stamp Tax, were continued for another year, Dr. E. R. Squibb having, at his request, been previously excused from serving on the Committee on Liquor Dealer's License, and his name having been substituted by that of R. W. Gardner, of Jersey City.

A vote of thanks to the retiring officers was passed and the Association adjourned until Friday morning at 9 o'clock.

#### *Fifth Session—Friday Morning.*

After the reading and approval of the minutes, the amendment of the by-laws was adopted, requiring the President to discuss in his annual address such scientific topics as he may select, instead of reviewing the labors of the Committee during the past year.

The report of the Committee on Specimens was read by Dr. A. W. Miller, accepted and referred.

On motion of Dr. Squibb, the salary of the Reporter on Progress of Pharmacy was fixed at \$400 for the ensuing year. Notice was also given by Dr. Squibb of a proposed amendment of the by-laws to increase the salaries of the Treasurer and Permanent Secretary \$100 per annum, in view of the increased duties of both officers; the proposition lies over until the next meeting.

The following essays were read and referred: On the amount of carbolic acid necessary to prevent the growth of organisms in solutions of alkaloids, by E. H. Squibb; On the influence of heat upon the medicinal properties of sarsaparilla, by Prof. J. F. Judge; On the reaction of chloral hydrate, by J. M. Maisch; On gelseminia and gelseminic acid, by C. F. Fredigke; On assaying cantharides and their preparations, by J. M. Maisch; On Indian remedies, by B.

Stacey; On weights and measures, by Prof. O. Oldberg; On fluid extract of vanilla, by Dr. E. P. Nichols; On fluid extract of sarsaparilla, by Prof. Judge; also a paper by A. T. Moith, discussing the relations of physicians and apothecaries.

The Secretary exhibited a sample of muriate of cinchonia, which is put up in New York in fraudulent imitation of sulphate of quinia of French manufacture, and at the present time extensively sold into the interior towns of the Southern States.

Prof. Markoe showed diatomaceous earth, collected by him in Richmond, Va.

After the election of new members, Messrs. Remington and Kennedy acting as tellers, the Business Committee offered the following:

The American Pharmaceutical Association is now about to close its twenty-first annual session in the capital of the Old Dominion. Some hesitation was felt at the last meeting in deciding on this place, but the success of our experiment at Cleveland induced us to repeat it. The kind courtesy and generosity of our reception, the unbounded old Virginia hospitality of the pharmacutists and citizens of Richmond and the beautifully appropriate welcome of His Honor, the Mayor of this city, has dispelled every doubt of the propriety of our selection. Nothing has been left undone that could add to our comfort and pleasure, and when we leave this place to return to our homes we shall carry with us pleasant recollections of this visit which will not soon be effaced from our memory. As a faint expression of our warm appreciation of the kindness shown us, be it

*Resolved.* That the hearty thanks of this Association be and are hereby tendered to the pharmacutists and citizens of Richmond for the cordiality of our reception at this our first visit to the "Sunny South."

President Hancock arose and in a few appropriate and well-timed remarks bore testimony to the warmth of the reception of the Association at the hands of the pharmacutists and citizens of this city. He said that they had never met with a heartier reception anywhere. He indulged the hope that at their next meeting, in Louisville, representatives would be present from the Virginia Pharmaceutical Association.

Thanks were also tendered the Richmond press for their faithful reports of its proceedings, after which the Secretary, at 12½ o'clock, offered a resolution, which was adopted, that the Association do now adjourn to meet on the second Tuesday in September next, at 3 o'clock P. M., at Louisville, Ky.

PHARMACEUTICAL NOTES.

By J. DONDE.

*Vallett's Ferruginous Mass*, prepared by myself and such as I have seen druggists getting from New York, becomes hard after some time, so that it cannot be used any more. To avoid this change, which I attribute to the honey, I made some with sugar and glycerin after the following formula :

Sulphate of iron,	.	.	.	500 grams
Carbonate of sodium,	.	.	.	600 grams
Rain water,	.	.	.	8 litres
White sugar in powder,	.	.	.	280 grams
Glycerin,	.	.	.	150 grams

Operate by the process of Soubeiran, or follow the U. S. Pharmacopœia, and wash, strain and press the carbonate of iron, which weighs 500 to 600 grams, add the sugar and glycerin and evaporate to a pilular consistence.

This preparation will keep for three years.

*Syrup of Digitalis suitable for Preparing the Infusion.*—Medicinal substances produce different and sometimes opposite effects, not only in proportion to their dose, but also in accordance with the manner in which they are administered. Thus: the infusion of colombo is used as a tonic, and the decoction in dysentery; rhubarb is tonic in the dose of five decigrams, purgative in doses of four to eight grams, and it has an astringent action in decoction or when roasted. In general, it is evident that the diversity of preparation in which a medicinal substance may be given, in modifying its qualities, will determine different and often opposite effects.

In the substances named above, the pharmacist should follow closely the prescription of the physician, and thereby avoid all trouble, in case the latter has erred in the form of the preparation. But there are other substances—like fox-glove—the correct pharmaceutical preparation of which is the infusion and not the decoction; and if errors have been made in prescribing, they must be corrected by the pharmacist, who is educated not merely by having practiced his profession for four or five years, but who has also mastered the principles of science.

I remember a case in which a physician prescribed digitalis in de-

coction; but the pharmacist, seeing the error, took the infusion instead. The diagnosis had been well made, the therapeutical indications even better carried out, for the patient felt relieved. The following day the physician ordered this prescription to be repeated, which was done by another pharmacist, not so well instructed, who followed servilely the formula prescribed, and after the patient had taken two spoonfuls she was nauseated, had headache, etc. The physician having been called in, learned, on inquiry, that his prescription had been properly modified the first time and had been followed literally in the last instance. Such and similar cases may happen in countries where the laws allow to practice pharmacy without demanding from the apothecaries any proofs regarding their knowledge and scrupulous diligence, so requisite for practicing properly a profession of such direct influence upon the health and life of men. On this subject the *Chemical News* says: "An ill informed pharmacist is more dangerous than an ignorant physician; for the former may cause the death of the patient directly, while the physician has a lightning conductor in the way of his homicidal prescriptions, and this lightning conductor is the pharmacist."

Sometimes pharmacists do not take the trouble to weigh the substances for making infusions or decoctions; principally in well reputed and frequented stores, when the customers urge the apothecary for their medicines, inducing him to shorten his operations, to the disadvantage of the medicine. To prevent such inconveniences in the case of digitalis, I have prepared a syrup which has been employed for some time, principally in the store of Mr. J. Font. The formula is as follows:

Simple syrup,	.	.	.	.	2000 grams
Hydro-alcoholic extract of fox-glove,	.	.	.	.	50 grams
Rain water,	.	.	.	.	40 c.c.

Concentrate the syrup to 32°, at a boiling temperature, remove from the fire, and when it has cooled to pretty nearly 50° C. add the extract dissolved in the water. This will yield a syrup of fox-glove containing one gram of the extract, which is equivalent to three grams of the leaves in 40 grams of syrup. By dissolving 40 grams of it in 210 grams of water, the infusion will be ready for use, strongly bitter and possessing its characteristic odor.

*Merida, Yucatan, August 8th, 1873.*



GLEANINGS FROM THE EUROPEAN JOURNALS.

BY THE EDITOR.

*Analysis of Juniper Berries.*—E. Donath has obtained the following results: water, 29.44; volatile oil, 0.91; formic acid, 1.86; acetic acid, 0.94; malic acid (in combination), 0.21; wax-like fat, 0.64; green resin of the etherial tincture, 8.46; hard brown resin of the alcoholic tincture, 1.29; bitter substance, by Steer named juniperin, 1.37; pectin, 0.73; protein compounds, 4.45; cellulose, 15.83; ashes, 2.33.—*Chem. Centralbl.*, 1873, No. 29, from *Polyt. Journ.*

*Coloration of Chloralhydrate by Oil of Peppermint.*—On bringing the two substances in contact, a reddish color is soon developed, which gradually darkens to cherry-red. The color is readily soluble in ether, alcohol and chloroform; boiling does not destroy it; sulphuric acid heightens its intensity, and, if now chloroform be added, a dark violet tint is produced. The oils of lemon, bergamot, juniper, crisped mint, rosemary, cloves, anise and fennel do not produce any coloration with chloralhydrate.—*Archiv d. Pharm.*, 1873, July 29.

*Quercetin in Catechu and Quercitrin in Sumach.*—Aqueous solutions of catechu, on being agitated with ether, yield to this solvent quercetin, which may be obtained pure by washing the etherial extract with water, dissolving the residue in strong alcohol, and mixing this solution with boiling water. All varieties of catechu contain it, but some in very minute proportion. On treating the alcoholic extract of sumach with water, this with ether, &c., quercitrin is obtained.—*Zeitschr. f. Anal. Chem.*, 1873, 127.

*Balsam of Peru Adulterated with Storax* has been met with by H. Schweikert. Besides the spec. gravity, which was 1.12 only, there was nothing to suggest any adulteration, as it yielded, like the pure balsam, a hard resin with strong sulphuric acid,\* and developed no foreign odor on being warmed. Distilled with solution of table salt, little alcohol was found in the distillate, but oily drops which smelled strongly of storax. To detect such an adulteration, the author suggests petroleum benzin, which should yield a clear solution with pure balsam of Peru, but furnishes a turbid mixture with alcoholic solution of storax.—*Archiv d. Pharm.*, 1873, July, 53—55.

*Iodo-arsenic Acid.*—Prof. Silvestro Zinno, of Naples, has prepared

\* See American Journal of Pharmacy, 1873, p. 353.

this new compound by gradually adding iodine, diffused in water, to a boiling solution of arsenious acid, until the color ceases to disappear. After filtering the solution through wood charcoal and evaporating, the new acid separates after some time in small colorless crystals, having the composition  $\text{AsO}_3\text{I}_2$ , and of which 3.24 parts are soluble in 100 parts of water at ordinary temperature; its salts are insoluble or sparingly soluble in cold water. When treated with a hot solution of iodide of potassium, a portion of the acid crystallizes, on cooling, in fine silvery scales, and the solution yields, on evaporation, readily soluble cubical crystals of iodo-arsenate of potassium iodide, the composition of which was found to be  $\text{KI}, \text{AsO}_3\text{I}_2$ .—*N. Repert. f. Pharm.* 1873, p. 385—390.

*In the Preparation of Ergotin of Bonjean*, it frequently happens that the liquids begin to ferment while being evaporated, and even that fermentation commences in the displacement apparatus. Henrotte recommends in such cases to express the contents of the percolator, and to heat the liquid to boiling for several minutes, when it is passed through a wet strainer, and may afterwards be evaporated without fear of further fermentation.—*Rép. de Pharm.*, 1873, 366.

*Natural Iodine Wine*.—Boinet proposes to ferment the juice of grapes in contact with seaweeds, particularly *Fucus vesiculosus*, and regards the product as the best, most natural and easiest for administration and assimilation. It is obtained by placing in suitable tanks alternate layers of crushed grapes and sea plants, and covering the whole with cut straw, as a protection from too much contact of air and to favor fermentation. After fifteen or twenty days the fermentation will be completed; the liquid is expressed and further treated as ordinarily in the preparation of wine. When finished it has a rather agreeable taste of sea plants, and is even readily taken by children. It has been successfully used in the hôpital des enfants. If this so-called natural iodine wine is not obtainable, the following is offered as a substitute:

Tincture of Iodine,	.	.	two grams,
Tannin,	.	.	twenty-five centigrams,
Water,	.	.	one thousand grams.

Of this mixture a tablespoonful may be taken by adults in wine at breakfast and dinner.—*L'Union Pharm.*, 1873, July.

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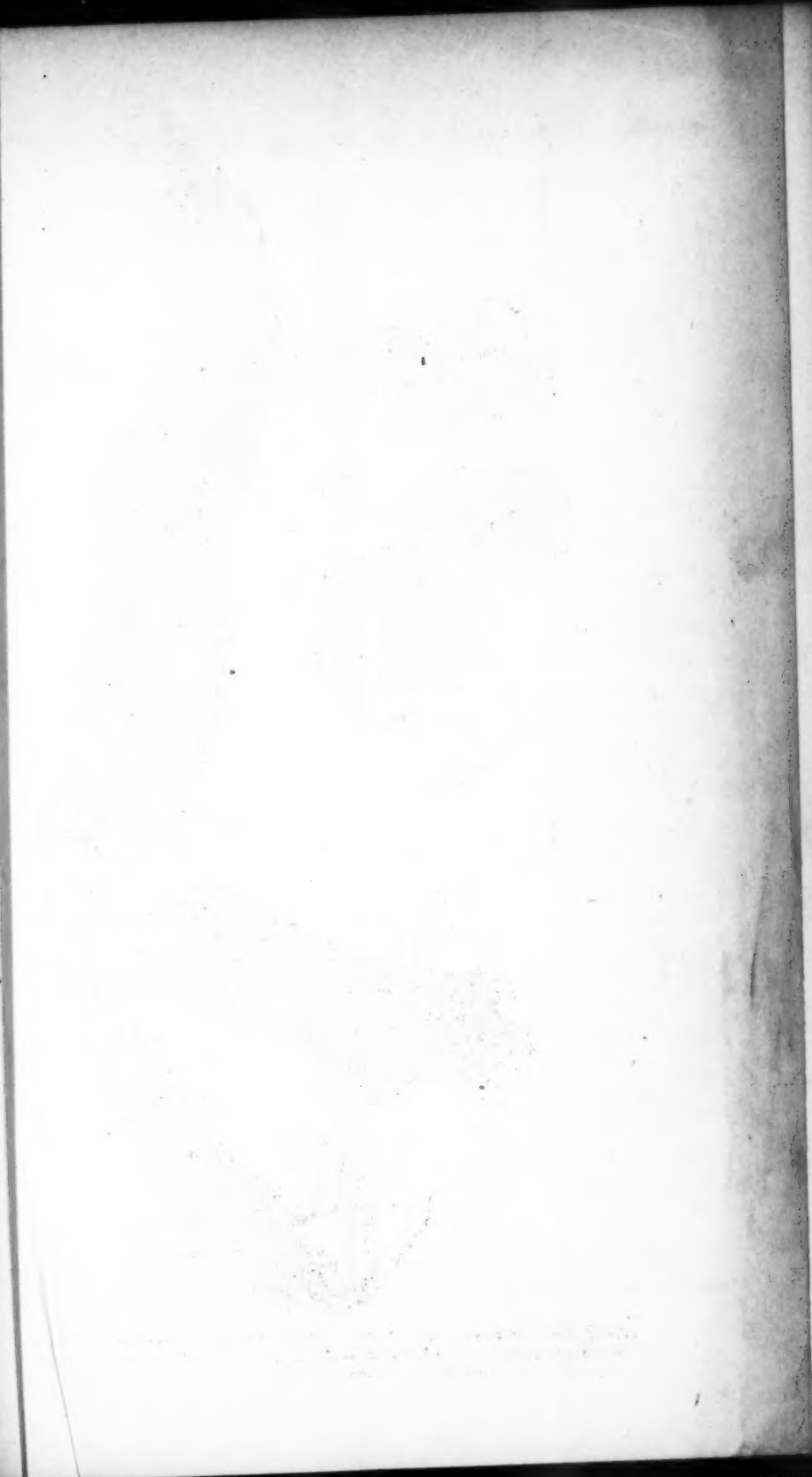


Fig. 2.

Fig. 1.



True **PAREIRA BRAVA**—Fig. 1, root of *Chondodendron tomentosa* sample purchased in London in 1862. Fig. 2. Transverse sections of roots received from Mr. J. Correa de Mello.

Fig. 1.



Iron tomentosum, from a  
Transverse sections of

Fig. 3.



Fig. 3. Bunch of fruits of *Chondodendron tomentosum*, R. et  
specimen preserved in alcohol, sent by Mr. Peckolt.

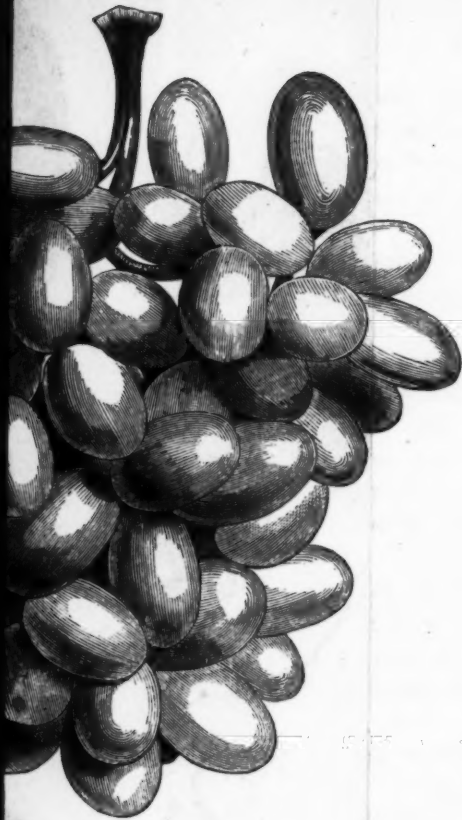
Fig. 4.



Fig. 4. Transverse section of stem of *Cissampelos Pareira*, L. From a Jamaica  
specimen.

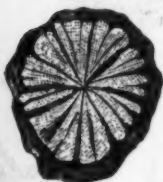


Fig. 3.



Fruits of *Chondodendron tomentosum*, R. et P., from a specimen in alcohol, sent by Mr. Peckolt.

Fig. 4.



Transverse section of stem of *Cissampelos Pareira*, L. From a Jamaican specimen.

Fig. 5.

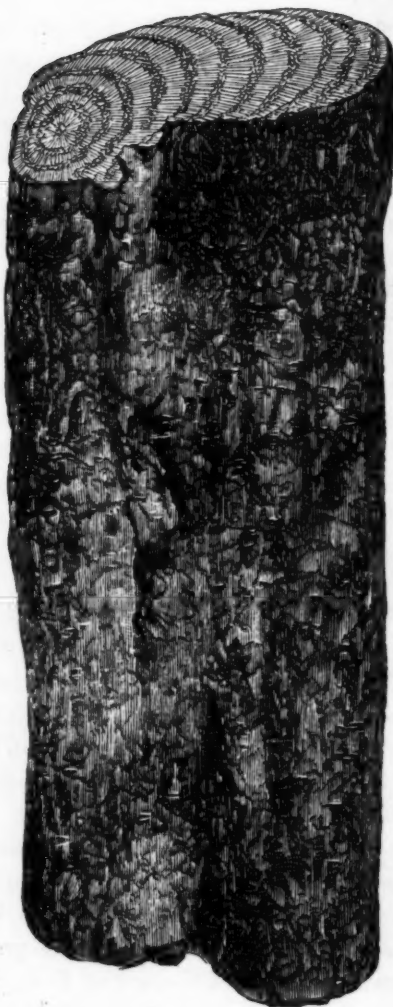


Fig. 5. Root (?) commonly known as *Pareira brava*, and erroneously regarded as derived from *Cissampelos Pareira*, L.

ON PAREIRA BRAVA.

By DANIEL HANBURY.

[[The botanical origin of the various stems and roots known as *Pareira Brava* is extremely obscure. By most writers the drug is referred without question to *Cissampelos Pareira* Linn., a climbing plant of the order *Menispermaceæ* growing in the tropical regions of both the Old and New World.

Some years ago the difficulty of purchasing *Pareira Brava* of good quality in London induced me to seek a supply in the West Indies. I accordingly procured, on behalf of the firm of which I was then a member, a quantity of the stems and roots of *Cissampelos Pareira* L., collected in Jamaica under the supervision of Mr. N. Wilson, director of the Bath Botanical Garden in that island. The first importation was accompanied by herbarium specimens of the plant, the examination of which removed all doubt as to its origin. I also obtained specimens of stems of *Cissampelos Pareira* similarly authenticated, from correspondents in Trinidad, Brazil and Ceylon.

From these materials it at once became evident that the long-accepted statement that *Pareira Brava* is derived from *Cissampelos Pareira* Linn. was erroneous.\* In fact neither the stem nor the root of the plant at all resembles any of the forms of that drug I had ever met with in commerce.

What then is *true Pareira Brava*?—To answer this question we must look back to the early history of the drug.

The merit of having first given some account of *Pareira Brava* is usually conceded to the Dutch traveller Piso, who in his work *De Medicina Brasiliensi*, published in 1648, described a plant called by the Portuguese *Caapeba*, *Cipó de Cobras* or *Herva de Nossa Senhora*. Piso's figure is scarcely recognizable, but his description of the fruit as resembling the catkins of hop (*semen magnum coloris rosacei, e capsulis lupulo similibus prominens*) applies well enough to a *Cissampelos*, and in fact *C. glaberrima* St. Hil. is known under these Portuguese names in Southern Brazil at the present time. My friend, Mr. J. Correa de Mello, of Campinas, Prov. S. Paulo, has been good enough to send me a specimen of this plant and of its root; and the latter I find to be wholly unlike any sort of *Pareira Brava*.

That Piso does not mention *Pareira Brava* was indeed remarked as

\* This fact was first pointed out in the *Pharmacopœia of India*, 1868, p. 8, note.

long ago as 1710;\* and it is only since the drug has been supposed to be derived from *Cissampelos* that authors have identified it with Piso's *Caapeba*.

Pareira Brava was certainly first brought to Europe by the Portuguese. It first attracted general attention in 1688, when Michel Amelot, Marquis de Gournay, a privy councillor of Louis XIV, and a very distinguished political personage, brought it with him from Lisbon, whither he had been sent as ambassador by the French king. There can be no doubt that the drug was considered to possess extraordinary properties. Rouillé, the successor of Amelot in the Lisbon embassy, also took home with him to Paris some Pareira Brava; and in 1710 we find it claiming the notice of the French Academy,† who requested Etienne-François Geoffroy, Professor of Medicine and Pharmacy in the College of France, to investigate its virtues. Jean-Claude-Adrien Helvetius, a physician of great merit, who though a young man was consulted by Louis XIV in his last days, and was afterwards attached to the court of Louis XV, tried the new drug still earlier,‡ and gave strong testimony in its favor.

Both Geoffroy and Helvetius were correspondents of Sir Hans Sloane, that diligent promoter of science whose immense collections gave origin to the British Museum,—and among the Sloane MSS. I have found a letter of Helvetius§ addressed in 1715 to Monsieur Duyvenvoorde, ambassador from the States General to George I., a portion of which I will here quote:—

“I am extremely pleased sr that you have apply'd yourself to me for my advice about the use of the *Pareira Brava* which has been recommended to you, because I can give you a very good account of it having been one of the first that introduced it in France. I have made abundance of lucky experiments about it which have made this medicine very well known to me, wherefore I assure you, you can do nothing better than to make tryall of it. . . The Pareira Brava is a root which comes to us from Brazil by the way of Lisbon, but which the war has rendered pretty scarce; however it is to be found

\* *Hist. de l'Acad. Royale des Sciences*, année 1710, 56.

† Id.

‡ Helvetius, *Traité des Maladies les plus fréquentes et des remèdes spécifiques pour les guérir*, Paris, 1703, 98.

§ Sloane MS., No. 3340, p. 291.—The letter has already been published in *Phil. Trans.*, No. 346, Nov. and Dec., 1715, p. 365.

among the good druggists and is sold [at] Paris for 40 livres the pound. 'Tis called in Brazil the Universall Medicine, and made use of there in all kinds of distempers. A Capuchin monk who came from thence told me he could not give it a greater character than by assuring me that in all their voyages they carried the gossell in one pockett and the Pareira Brava in another. . . ."

Helvetius recommended the finely-powdered root in five grain doses, to be taken in infusion warm like tea.

Petiver, apothecary of London, and Secretary to the Royal Society, an active collector of objects of natural history of every kind, whose letters are also in the Sloanian collection, thus wrote, Dec. 11th, 1716, to Colonel Worsley, His Majesty's Envoy at Lisbon:—

" . . . I am glad to hear y<sup>e</sup> Brazil fleet is safely arrived, w<sup>ch</sup> I hope has brought some materialls for my succeeding *Collectanea*, and amongst them nothing can be more welcome than specimens of y<sup>e</sup> leaves and fruit of y<sup>e</sup> Ipecacuanha, Pareira Brava, Balsam Capivæ and y<sup>e</sup> true Brasile and Brasiletto woods, all which will be very acceptable discoveries. . . ."

The first author to give an account in print of Pareira Brava seems to be Pomet, whose *Histoire des Drogues* was completed in 1692.† He describes the drug as then recently seen in Paris, and he figures the specimen given him by Tournefort.

Geoffroy, in his excellent *Tractatus de Materia Medica*,‡ a work he did not live to complete, calls the drug by its Brazilian name of *Butua*, or *Pareira Brava* of the Portuguese, and describes it as a root, woody, hard, contorted, externally of dark color, rough, with many wrinkles, some long, some running round it transversely, like that of *Thymelea* [*Daphne Gnidium* L.], internally of a dull, yellowish hue, knit together, as it were, with many woody fibres, so that when cut transversely it exhibits several concentric circles, intersected by numerous rays of fibres passing from the centre to the circumference; inodorous, somewhat bitter, with a certain degree of sweetness like liquorice, as thick as the finger, or sometimes as a child's arm. He adds that the Brazilians and Portuguese most highly extol

\* Sloane MS., 3340, p. 306.

† As proved by the letters of approbation which precede it. But it was not published until 1694.

‡ Tom. II. (1741) 21.

its virtues as a diuretic, lithontriptic, vulnerary, stomachic, cordial, and alexipharmic,\* and, in fact, regard it as a complete panacea.

The question now arises—Can the drug which was introduced with so much of laudation be clearly identified?

As already stated, Pomet has figured it, and his engraving is excellent. But Sloane has left us better materials. In his collection of *materia medica*, now in the British Museum, there are many well-preserved specimens of the drug obtained from different persons and at different periods, *and all of one kind*; and in his voluminous manuscript catalogues and his other papers, are entries throwing light on their origin.

The first notice I have found is a letter from Lisbon, dated October 17th, 1699, addressed by Joseph Geston to John Ellis,† in which the writer says:—

“By order of my brother, Wm. Geston, I send you here enclosed six sticks of *Pareira Brava*, or *Parra Brava*. The use of it, I am informed, is in powder, one scruple, and to the strongest patient one octave [drachm] in Rhenish wine. . . . Its virtues are for the stone, gravell, obstruction of the urine, and for the colick,—a very excellent remedy.”

Though this letter is not addressed to Sloane, nor is he mentioned in it, yet from its occurrence among his correspondence there can be no doubt that the specimens to which it relates were intended for him.

The entries in his manuscript catalogues, which are in his own hand writing, are these:—

“652. *Pareira Brava*.—From Brasile, pretended to be good for the stone.”

“4039. *Pareira Brava*.—A root used in the stone.”

“6708. The *Pareira Brava*, of a brown color, from Brazil, said to be the best sort.—From Mons<sup>r</sup>. Geoffroy.”

\* Hill judiciously remarks that this is going too far in its praise, and yet omitting some of its real virtues. “It is certainly a diuretic,” says he, “of no inferior kind, and has done great service in nephritic cases; and in pleurisia and quinzies has been attended with more success than almost any medicine we know of singly. In suppressions of urine scarce anything is more efficacious or more instantaneous in its effect, but it is folly to infer from this that it will dissolve the stone. . . . In cases of ulceration of the kidneys or bladder, when the urine is purulent and voided with great difficulty, there is scarce anything equal to this root as a remedy.”—*Hist. of Mat. Med.* 1751, p. 600.

† Sloane MS., 4045, fol. 240.



"10471. Sevll. specimens of the *Pareira Brava*, from Lisbon, accounted a great remedy in suppression of water and the stone,—according to Monsr. Geoffroy, the *Ambitua* or *Butua* of Zanoni.—From Dr. Fuller, Sevenoaks."

In 1866, I applied to my friend Theodor Peckolt, druggist, of Rio de Janeiro, then residing at Cantagallo, in the same province, on the subject of *Pareira Brava*, in consequence of which I received from him specimens of two plants, the one marked *Butua* or *Pareira Brava legitima*, the other *Butinha* or *Pareira Brava miuda* (literally *small Pareira Brava*), together with a large dried entire plant of the former. The herbarium specimens of these plants presented no characters by which I could distinguish them as two species; and Mr. Peckolt subsequently informed me that their difference consists chiefly in *habit*, and that the first or *legitimate* *Pareira Brava* is found in much drier situations than the small sort, or *Pareira Brava miuda*.

I have also received specimens from my friend Mr. J. Correa de Mello of Campinas, marked *Parreira Brava pequena* (*small Pareira Brava*) or *Abuta pequena*, and others labelled *Leaves of the plant producing Pareira Brava*, all of which seem referable to Mr. Peckolt's plant. Mr. Correa de Mello has likewise sent me the dried root, and I have also received the root as supplied by a drug house of Rio de Janeiro.

Within the last few weeks two specimens of roots bearing some leaves, marked respectively *Pareira Brava, large leaf*, and *Pareira Brava, small leaf*, have been presented to the Pharmaceutical Society as well as to myself by Mr. G. B. Francis, of the firm of Hearon, Squire and Francis. Between these two sorts I fail to recognize any difference.

The roots of Mr. Peckolt's *Pareira Brava legitima*, those sent me by Mr. Correa de Mello, and those received from Mr. Francis, completely agree with Sloane's specimens, as well as with Pomet's figure.

As to the plant, I identify it with *Chondodendron\* tomentosum* of Ruiz et Pavon, with an authentic specimen of which in the herbarium of the British Museum I have compared it. It is the *Cocculus Chondodendron* of De Candolle (Prod. I. 98), and has been figured as *Coc-*

\* Mr. Miers (*Contributions to Botany*, III., 307) contends for this name being written *Chondrodendron* as more in accordance with its derivation from *χρῶς*. But I think it safer to retain the original spelling as accepted by all botanists.

*culus* (?) *platyphylla* by Auguste de St. Hilaire,\* and by Eichler,† as *Botryopsis platyphylla* Miers. It agrees well with the plate of *Cissampelos Abutua* in Vellozo's *Flora Fluminensis*‡ with which Eichler doubtfully identifies it.

*Chondodendron tomentosum* has been found in various parts of Brazil, where it is known as *Butua* and *Abutua*. Its raceme of large oval berries, exactly like a bunch of grapes, is another evidence that it is the plant which the old Portuguese colonists called *Pareira Brava* or *Wild Vine*.§ Neither the fruit nor the foliage of *Cissampelos Pareira* have anything about them suggestive of a grape-vine.

The root of *Chondodendron* cannot be confounded with the stem, which is woody and fibrous and of a different structure. Geoffroy's description of the former, which I have translated at page 451, is correct as far as it goes. I may add that the numerous specimens I have seen present but little variation. All are portions of a tortuous, branching root, wrinkled longitudinally and having transverse fissures, constrictions, or ridges. The root is externally of a blackish-brown, and light yellowish-brown within. In Mr. Francis's drug there are young roots having the remnants of green aerial stems rising from the upper part. In Mr. Peckolt's specimen the aerial stems are fully preserved, as thick as the finger and many feet in length. The root seems to be gorged with juices so that under the penknife it cuts more like a very hard fat or wax than as a fibrous wood. In transverse section it does not display zones of the same regular and beautiful definition that one sees in ordinary *Pareira Brava*. In the root of *Chondodendron* there is a large well-marked central column composed of wedges diverging from a common axis, around which are arranged a few concentric rings intersected by wedge-shaped rays which are often irregular, scattered, and indistinct. The axis is not often eccentric.

\* *Plantes Usuelles des Brasiiliens*, pl. 42.

† Martius, *Flor. Bras.*, fasc. 38, tab. 48. Eichler makes two species under the name of *Botryopsis*, Miers eight, six of them being apparently forms of *Ch. tomentosum*. Mr. Mier's species, as named by himself, can be seen in the British Museum, and a type-specimen of the plant figured by Eichler in the Kew Herbarium.

‡ Tom X., tab. 140. Mr. Miers regards this to represent his *Abuta macrophylla*, a very different plant.

§ In Portuguese the word is written *Parreira*, and signifies a vine that grows against a wall or over an arbor. *Pára* is a vine-leaf.

In *Cissampelos Pareira* the root and stem are nearly alike in structure, and in transverse section show no concentric rings. Those received from Jamaica, which were the largest that could be collected, were rarely so much as an inch in diameter, and in many localities it is difficult to obtain the stem or root thicker than a goose quill.

The *Pareira Brava* of English commerce is mostly of larger size than the root of *Chondodendron*, and is a much more woody substance. Its internal structure, which is familiar to most druggists, is very remarkable, consisting of a series of layers which are often developed exclusively in one direction. Nothing is known of the botanical origin of this drug, beyond the fact that the structure of the wood is that of the order *Menispermaceæ*.

Of late years even this sort has become rare, and its place has been taken by a drug completely void of medicinal power. This latter consists of cylindrical woody truncheons which have an internal structure not very diverse from that represented below, though generally less eccentric, with always a distinct central pith. The wood is tasteless, and often seems to have been injured by damp. It should be rigidly excluded from pharmaceutical use.

Several other sorts of *Pareira Brava* are known—at least in South America. One, of which there is a parcel now in the London market, as remarkable for its large size, and for being internally of a fine yellow. As it is also very bitter, it probably contains berberine.

Another sort is derived from *Abuta rufescens* Aublet, a well-marked plant growing in Guiana and North Brazil. Specimens of a thick woody root, marked *Abutua grande* or *Parreira Brava grande*, and attributed to this species have been sent to me by Mr. Correa de Mello; they exhibit numerous concentric layers traversed by very distinct, dark medullary rays, the inter-radial spaces being white, and rich in starch. It is apparently a well-marked sort, and one I have not seen in commerce.\*

In conclusion, I strongly advocate returning to the use of the root

\* When Aublet was in Guiana, 1762 4, the stems of *Abuta rufescens* were shipped to France as *Pareira Brava blanc*. He says there is a variety of the same with the woody parts reddish, which is known in Cayenne as *Pareira Brava rouge*. He also describes and figures a plant he calls *Abuta amara* or *Pareira Brava jaune*, which has the wood yellowish and very bitter.

This last is, I think, identical with the yellow wood of which, as I have said, there is a quantity now on sale as "*Pareira Brava*." See *Hist. des Plantes de la Guiane Française*, i. (1775), 618-21, tab. 250-51.

of *Chondodendron*, which is the drug on which the reputation of *Pareira Brava* was originally founded.

In Brazil this root is regarded as the legitimate sort, and is still held in the highest esteem.

Though it has not been clearly recognized by European writers, it is not altogether unknown. Guibourt\* seems to have been acquainted with it and even correctly surmised its botanical origin. It is the root figured by Göbel and Kunze,† and there is an old specimen of it in the Pharmaceutical Society's Museum marked *Pareira Brava*. I myself met with it in the market in 1862. Lastly, Dr. Squibb has pointed out‡ that some small lots of *Pareira Brava* imported into New York in 1871 consisted in large part of a drug entirely different from any previously seen, and that he at first supposed it an adulteration; but that subsequent examination had shown him that the drug in question agreed well with the older descriptions of *Pareira Brava*, and especially with Pomet's figure, so that he was convinced it was true *Pareira Root*. From Dr. Squibb's description I feel sure that the drug before him was the same as that to which I have called attention in the present paper.

There can be no doubt that it would become plentiful if the demand should arise, and that it would advantageously replace the worthless kind now found in the drug trade.—*Pharm. Journ.*, Aug. 9, 1873.

#### THE COLLECTION OF GUM SENEGAL IN SENEGAMBIA.‡

By DR. BERANGER FERAUD.

Since the discovery of Senegambia, the gum of the country has been one of the principal objects of exchange between Europeans and the indigenous blacks, and the traffic has been so extensive and important that even the policy of the country has sometimes been subordinated to it. Senegal gum is yielded by several trees of the same genus (*Acacia arabica*, *A. Seyal*, *A. Verek*, *A. Adansonii*), and it cannot be pretended that all the species are yet known. These gum trees, which grow in the Sahara regions, are cultivated by the

\* *Hist. des drog.*, ed. 4, iii. (1850) 671.

† *Pharm. Waarenkunde*, ii. (1830-34) tab. 13, fig. 1, b c.

‡ *American Journal of Pharmacy*, March 1, 1872, 107.

§ *L'Union Pharmaceutique (Bulletin)*, i, 67, from a memoir on the natural products of Senegambia, published in the *Moniteur Officiel de Sénégal*.

Moors and some black tribes, who carry the product to the various markets scattered along the banks of the Senegal. The trees also grow spontaneously in many parts of Senegambia, especially on the right bank of the Senegal; it is there that the forests of gum trees occur, if such a term can be applied to the very thinly sown agglomerations of these trees.

The forests of gum trees from which the products are sent into Senegambia are three in number:—(1) that of Alfatak, or Afatak, which is situated about fifteen leagues from the river, opposite Podor, and extends to Lake Cayar, occupying a large portion of the country of the Brakna; (2) that of Liebar, or El Ebiar ("the wells"), situated thirty or forty leagues from the river, in the country of the Darmancour Moors, and containing many small red gum trees (*A. nilotica*); (3) that of Sahel, in the territory of the Tararza Moors, the product of which is carried to Gahé. The latter forest consists exclusively of white gum trees, and it is the gum from these trees which is carried to Portendick to supply the demands of English traders.

The following details are given on the authority of M. Carrière. A gum forest is looked upon as a sacred place, where no stranger dares break off a branch or carry away the gum, under pain of celestial in addition to terrestrial punishments. Each of the members of a tribe which possesses a gum forest has the right to collect gum in it, and his share depends upon his activity, he having a right to that only which is collected by himself or by his slaves. The first collection of gum commences in October, at which time those of the tribe who intend collecting the gum establish themselves in huts on the outskirts of the forest, and within reach of the wells. The collection of gum is very laborious, for the forest abounds in climbing and prickly plants, so that the trees are not gained without infinite trouble and numerous punctures and excoriations; but the appetite for gain overcomes all obstacles. The master is stimulated by the wants of his family and by pride, the slave is driven by hunger and the fear of beatings; thus all labor with sustained ardor, and little by little the gum is collected.

For the removal of the gum from the branches of the acacia whence it exudes, the Moors arm themselves with long sticks crooked at the end, by the aid of which they remove the tears of gum, which collect in balls of varying size. When the work to be done lies within



so small a compass that in the middle of the day the collectors can return to the wells without too much loss of time, they carry only a small bag made of skin, into which the balls of gum are placed. But if the outskirts of the forest have been explored, and it be necessary that the collectors penetrate further into the interior, another bag containing a small provision of water is also taken. But the master never allows the slave to carry any food with him, stimulating him to greater exertions by the promise, too often broken, of a good feast on his return. Should the unfortunate captive not have gathered the prescribed quantity by the evening, and, exhausted by hunger and the burning heat, dare to eat any of the gum he has collected, he is mercilessly beaten. The first collection of gum finishes in December; a second is made in March. The latter is more abundant in proportion as the winds have been stronger and more prolonged during the year; that is to say, the branches previously distended by the humidity of the rains have become more thoroughly dried, and crack more deeply and in a greater number of places. The trading in the gum is effected in the months of January and March; the tribe abandoning the forest as soon as the collection is finished, and resorting to the market. In disposing of the gum the Moor shows a considerable amount of avarice, selling it in small portions at a time, and going from ship to ship on the chance of obtaining a better price.

In the time of Adanson, about 1760, the quantity of gum exported from Senegal was nearly 30,000 quintals, or 900,000 kilograms; in 1827, a very bad year for collection, the exportation amounted only to 613,500 kilograms. But since the Moors have taken more precautions for preserving the forests from fire the production of gum has greatly augmented, and in 1868, 2,763,618 kilograms were exported from Senegal. In fact, the amount of 3,000,000 kilograms has frequently been surpassed.

Probably it would be possible, with the aid of the blacks, to create plantations of gum trees in the vast extent of country which forms the centre of the Senegambian triangle. Such a result would have a direct effect on the amount of production, and would tend to prevent the sudden and unexpected rises in the price of gum which every now and then occur.

The vereck (*A. Verek*) produces a hard, black-veined wood, which could be used for ebony work; it is especially a gum-yielding tree, and abounds in Senegambia.—*Pharm. Journ. and Trans.*, Aug. 30, 1873.

CAMPHOR.

Perhaps the most common and popular medicinal agent for household use is camphor, a drug which has been regarded as a cure all by mothers, grandmothers and great-grandmothers down through many generations. The "camphor-bottle," holding a solution of the agent in rum or dilute alcohol, is found upon a shelf in almost every dwelling; and if among the younger or older members of the family an ankle is turned, or a limb bruised, or there is head-ache, or tooth-ache, or ear-ache, or belly-ache, down comes the camphor-bottle, and the suffering member is well dosed. Camphor is a powerful agent, and in moderate doses is capable of doing much mischief. It is a matter of wonder that so few instances of injury result, considering its wide spread, empirical employment.

Camphor is brought to this country in a crude or impure state, and here it is subjected to the process of distillation to render it fit for employment. There are several important refineries in the country. A correspondent of *The People* presents the following interesting facts regarding camphor and this refinery :

The camphor of commerce comes from Formosa, Sumatra, Borneo, Japan and China. It is obtained in crystalline masses already formed, and also in grains by distillation. The tree which produces the former kind is a near relative of our basswood, which we know as a charming tree, perfuming the air and yielding the finest honey in the world. It grows on the Dirí Mountains in Sumatra, and in Borneo. It towers upward more than a hundred feet, and has been known to attain a girth of fifty feet. The spirited persuasion of the axe draws from this forest monster the white treasures secreted in the longitudinal fissures in its heart wood, sometimes, though rarely, in a layer as large as a man's arm, but more frequently in small fragments to be carefully extracted by some sharp pointed instrument. It is not an abundant bearer. Twenty pounds is a rare yield for a great tree; ten pounds is a good harvest from one of medium size, and many are felled and split that furnish no camphor. This, however, is not an entire waste, since the wood is easily worked and is never attacked by the voracious myriads of Eastern insects which destroy all other varieties except the teak and calambuco. House and ship timber are made from it, besides many articles of furniture, and the aromatic trunk is extremely valuable to the housekeepers of our colder climate. This kind of camphor seldom finds its way to Europe and America.

The Chinese ascribe to it marvellous medicinal properties, and pay for it enormous sums, thereby securing the entire yield.

Common camphor is obtained by distillation from the root, stem and leaves of certain species of *lauraceæ*, but more especially from the *laurus camphora*. Of this, also, there are two varieties. The Chinese or Formosa camphor is carried in junks to Canton and there packed in square chests lined with lead, whence it is sent to the different Eastern ports, where we procure it. It is of a grayish color, with a grain like sugar, and usually unattractive in appearance. The Dutch or Japan camphor is prepared in Batavia, is packed in tubs securely matted, is pinkish in hue, and coarser than the Chinese. Both kinds need purification before using.

Camphor is slightly soluble in water, but yields freely to alcohol, acetic acid, ether, and the essential oils. A pretty experiment may be tried with it, which the young people will find amusing. Scatter a few pieces of clean camphor upon pure water, and they whirl and sail about, keeping up the dance sometimes for hours. Drop among them some greasy matter and the merry little performers will stop on the instant.—*Scientific American*, Aug. 30, 1873.

#### THE USE OF NUT OIL IN PHARMACY, AND ESPECIALLY IN THE PREPARATION OF UNGUENTUM HYDRARGYRI NITRATIS \*

By M. FALIERES.

In a brief review of former formulæ for the preparation of citrine ointment, the author calls attention to the large increase which has taken place in the relative proportion of the nitric acid to the mercury. The proportions indicated by Baumé, in 1785, were nitric acid 128 parts, mercury 96 parts, lard 1000 parts. The mercury has been gradually decreased until, in the Codex for 1866, where equal parts (500) of olive oil and lard are ordered, the nitric acid is 100 parts, and the mercury 50. Thus the proportions which originally were 4 of nitric acid (sp. gr. 1.28) and mercury 3, have become nitric acid (sp. gr. 1.42) 2, and mercury 1.† Without blaming the progressive diminution of the metal, since even with this reduction the medica-

\* "Bull. des Travaux de la Société de Pharmacie de Bordeaux," vol. xiii, 165.

† In the B. P., where more olive oil is used, the proportions are, nitric acid 3, mercury 1.

ment still remains very powerful, the author objects to the great excess of acid. Suggestions have been made to remove the excess of acid by washing the ointment with a large quantity of water, and then adding an equal weight of almond oil, but have been rejected in consequence of the length and difficulty of the operation, and it being far from certain that the whole of the acid excess would be thus removed.

The author having had occasion to make a comparative investigation of pure olive oil and the oil of the ground nut (*Arachis hypogæa*), found that the arachis oil possesses a great aptitude for the nitric solidification. Hence he conceived the idea of suppressing entirely the lard in the preparation of nitrate of mercury ointment. The product so obtained seemed to present such marked advantages as to induce him to make known the process:

Mercury,	.	.	.	.	.	5 parts.
Nitric Acid (sp. gr. 1.42),	.	.	.	.	.	10 "
Nut Oil,	.	.	.	.	.	100 "

Dissolve without heat the mercury in the acid; pour the mercurial solution into the oil, agitating from time to time with a glass or earthenware spatula. After two or three hours, according to the quantity operated upon, and at a temperature of about 20° C., the mixture begins to take a milky consistence, which lasts for about an hour, then thickens to that of a soft butter. This latter stage lasts at least two hours, during any portion of which time the ointment may be poured out. The mass spreads with perfect regularity in a paper mould; the thickness of the layer is uniform, and there is no separation between the oily and mercurial elements, showing that the combination is complete. The product does not set so rapidly as the official one; at the end of ten or twelve hours it is easily divided by a wooden knife, but this is more conveniently done after it has stood for twenty-four hours; its consistence is then similar to that of cacao butter in the summer. Two or three days afterwards it appears to attain its maximum of firmness, and some has been kept upwards of two months without showing any appreciable difference in its consistence. Compared with the Codex preparation, the author considers that the ointment made with nut oil has greater cohesion, is not friable, and appears much better adapted for friction, as it melts and spreads upon the skin with greater facility.

M. Falières is of opinion that no serious exception could be taken to the change of fat excipient which he proposes. The progress attained in the manufacture of arachis oil has provided a white, bland, tasteless article, which is, commercially speaking, neutral. Perfumers, who are not, like pharmacists, bound by a formal code, make large use of the ground nut oil in the manufacture of pomades, cold cream, etc. A perfect type of a non-drying oil, it absorbs relatively small quantities of perfume; it requires the least wax, spermaceti, or stearine for its solidification, and finally may be kept almost indefinitely without turning rancid. The author promises at some future time to show in detail the advantages that may be obtained from the use of nut oil in a large number of pharmaceutical preparations.—*Pharm. Journ. (Lond.)*, June 28, 1873.

#### NOTE ON THE EXHIBITION OF RESIN OF COPAIBA.

BY A. W. GERRARD,

*Dispenser, and Teacher of Pharmacy, University College Hospital.*

The above resin has been recently introduced to the notice of the medical profession by Dr. Samuel Wilks as possessing therapeutic advantages over the balsam, and likewise as being more agreeable for the patient to take. In a letter to the *Lancet* of June the 21st, Dr. Wilks, in reply to numerous inquiries that had been made as to the best method of dispensing it, gave the following formula, which had been recommended by me, and was used in the dispensary of Guy's Hospital:

Take of—

Resin of Copaiba, . . . . .	180 grains.
Rectified Spirit, . . . . .	5 drachms.
Spirit of Chloroform, . . . . .	1 “
Mucilage of Acacia, . . . . .	2 ounces.
Water to . . . . .	12 “

Mix according to art.

These ingredients, when mixed in their proper order, form a mixture which, although it contains the resin in a fine state of division, I did not consider altogether satisfactory, as after standing a day or two the resin collects at the bottom of the bottle, forming a semi-compact mass which is shaken apart with difficulty. With the view of overcoming this objection, I made experiments with various other substances and obtained the best result in the following:



Take of—

Resin of Copaiba, . . . . .	15 grains.
Compound Powder of Almonds, . . . .	30 "
Water to . . . . .	1 ounce.

Rub the resin with the powder until well incorporated, then add the water after the manner of forming an emulsion.

This forms a cream-colored emulsion of a satisfactory character, having but a faint odor of copaiba. This may be removed by the addition of compound tincture of lavender, which at the same time imparts an agreeable pink tinge.

The emulsifying power of the powder of almonds is undoubtedly due principally to the fixed oil it contains, which acts as a solvent of the resin; the action is also assisted by the gum and sugar. For the use of hospital dispensers and others who may have frequent occasion to dispense it, it may be kept in a concentrated form, 1 = 4.  
—*Pharm. Journ. and Trans.*, July 26, 1873.

#### ON THE PRESENCE OF CYANOGEN IN BROMINE.

By T. L. PHIPSON, Ph.D., F.C.S., &c.

I have lately discovered in bromine issued as pure for pharmaceutical use, a notable amount of cyanogen. It has been known for many years (and I have myself alluded to it in another place) that during the manufacture of iodine a certain quantity of that most beautiful, but dangerous, compound, iodide of cyanogen, sometimes finds its way into one of the glass condensers; and it would appear, from the experiments to which I now allude, that a similar compound with bromine may occur in this liquid element—a more serious case than the other, since it is dissolved and masked in the liquid.

The presence of cyanogen in bromine may be detected in the following manner:—Take an equal weight of iron-filings (say  $\frac{1}{2}$  oz.) to that of the bromine, and add to the iron-filings four or five times their weight of water; mix in the bromine very gradually, and stir all the time, filter rapidly while warm from the reaction, place the filtered liquid in a partially closed bottle, and in the course of some hours a deposit of ferricyanide of iron (Berlin blue) will have formed, and may be collected on a filter. In the course of two days (with the above quantity) the whole of the cyanogen is thus eliminated.

In the samples of bromine hitherto examined, I estimate there has

been from 0.5 to 1 per cent. of cyanogen in round numbers, and I am rather inclined to believe that this substance is often present in commercial bromine. If perfectly pure bromine be used, the same reaction would enable us to detect cyanogen in steel.—*Chem. News*, Lond., Aug. 1, 1873.

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ANALYSIS OF A CURE FOR THE HABITUAL USE OF OPIUM  
AND MORPHIA.

By E. S. WAYNE.

Numerous advertisements from time to time have of late appeared of cures for the habitual use and abuse of opium and morphia. Several of these have come under the notice of the writer, and the remedies found to be in general as bad, if not worse, than the habit itself.

The last that has been brought to me for analysis is the extract of *Picus porteana*, so called, and must say, to me an unknown medicinal agent, and to be found only in the fertile imagination of the proprietor.

The bottle handed to me had upon it the following label and directions:

---

Bottle No. 1.

EXT. PICUS PORTEANA.

---

Take a Teaspoonful 3 or 4 Times a Day.

---

PRESCRIBED BY DR. J. C. BECK,

No. 112 John Street, near Fourth,

Ledger, 1873.

CINCINNATI, O.

Page 178.

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You will use the Bottles as they are numbered, using all of No. 1 before opening No. 2, and using all of No. 2 before opening No. 3, and so on. Be careful to follow the directions, and never taking more than ordered, but you take less if you can do so and feel well.

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Analysis of the above extract of *Picus porteana* shows that it is merely a strong tincture of opium, slightly disguised in taste and odor by some other substance; and that it contains 8.8 grains of pure morphia in the fluid ounce—equal to about 11.7 grains of sulphate of morphia, and about double the strength of tincture of opium of the U. S. P.

Comment is unnecessary.—*Cincinnati Lancet and Observer*, 1873.

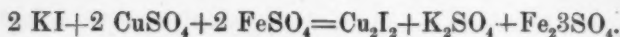
THE MEANS OF DETECTING AND ESTIMATING BROMIDE IN  
IODIDE OF POTASSIUM.\*

By ALFRED E. TANNER.

It occurred to me that the above subject would be well worthy attention at the present time, for not only are the processes for detecting and estimating bromide in iodide few and imperfect, but it also seems to me a very probable adulterant, inasmuch as there is a great difference in price between these two salts, and the difficulties attending the detection of bromide when mixed with iodide are considerable.

Cl, Br, and I, so resemble one another in their chemical characters and reactions that it becomes a difficulty by no means easily surmounted to distinguish them when in the presence of one another, and this is especially the case with the two latter, and as a sample of KI may contain 75 or more per cent. of KBr and yet be indistinguishable from the pure article when tried by the pharmacopœia tests, it needs little further to point out the desirability of investigating this subject; and before I go further, I must confess that I fear I have accomplished little towards doing away with the difficulties. What we require is a test presenting no great difficulties of application by the ordinary pharmacist, and one which shall indicate with a fair degree of accuracy the object sought to be attained. Of course it is well known to chemists that  $\text{PdCl}_2$ , when added to a neutral solution of an iodide containing bromide, will remove the whole of the I without affecting the Br, but  $\text{PdCl}_2$  is a rare and most expensive reagent to use, and would scarcely pay the pharmacist who examines usually but small parcels of iodide at a time. This, although I believe to be the most accurate, we must consider out of the question. Recent chemical works tell us that a mixture of  $\text{FeSO}_4$ , two parts, and  $\text{CuSO}_4$ , one part, added to a neutral solution of an iodide, in the presence of bromide and chloride, and the mixture neutralized with  $\text{NH}_3$ , will remove the whole of the I without affecting the Br or Cl. In my hands, at least, the practice of this process has been attended with only partial success, for I have found it impossible to remove the whole of the I; the difficulty therefore remains as great as ever; it is probable, however, that further experiments with this test may yet prove it adequate to the purpose. I rather suspect the  $\text{Cu}_2\text{I}_2$  to be slightly soluble in the solution from which it is precipitated; we must therefore seek some salt to add to the mixture to prevent this. The following is the reaction stated to occur:—

\* Paper read before the Liverpool Chemists' Association, May 8th, 1873.

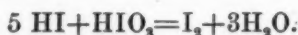


A test proposed by Van Melckebeke (*Journ. Pharm. d'Anvers*, xxviii, 49, 1872) seemed to promise well, and from its great simplicity would have been a valuable one if successful. It depended on the fact that a saturated solution of one salt is capable of dissolving appreciable quantities of another salt. A saturated solution of KBr was therefore used, and to this the sample of KI, in powder, was added in small quantities at a time, when, if pure, it dissolved readily, but if KBr were present, the liquid being already saturated with this salt, it would remain undissolved. Repeated trials with this test have proved to me that it is quite useless. The author recommends you to take 10 c.c. of the saturated KBr solution, and to add to this 10 drops of distilled water; 1 gram of the suspected salt, in powder, is then added, small portions at a time, which, if the iodide be pure, should at once dissolve; but 10 drops of distilled water is quite sufficient to dissolve 5 or more grains of KBr, and if no water be added, some KBr is very liable to be thrown out of solution by the shaking necessary. The next test I tried was one by M. Personne, published in the *Journal de Pharmacie*. It depends on the property possessed by  $\text{HgCl}_2$  of precipitating a solution of iodide but not one of bromide, bromide of mercury being soluble. It is necessary to the success of this test that the iodide be free from  $\text{KIO}_3$ ,  $\text{KCl}$ , and  $\text{K}_2\text{CO}_3$ .

I may mention here that  $\text{KIO}_3$  is much more frequently present than is generally supposed, and traces of it may generally be detected in the best samples of iodide, and as this salt ( $\text{KIO}_3$ ) is stated on pretty good authority to be of a poisonous nature, it behoves us to be on our guard against it; it is fortunately easy to detect by adding a little starch solution to the iodide to be tested, and then adding a small quantity of tartaric acid; a blue color is developed more or less rapidly, by the liberated iodide acting on the starch, if the KI contain  $\text{KIO}_3$ , thus:—



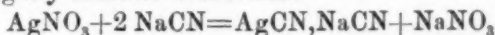
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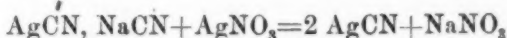
1 gram  $\text{HgCl}_2$  is dissolved to 20 c.c. with distilled water, of this solution 16 c.c. is capable of removing the whole of the I from 1 gram KI. If therefore the KI be mixed with KBr a proportionably less quantity of the mercuric solution will be required.

It is a somewhat curious fact, and one which I have nowhere seen recorded, that when exactly half the mercuric solution is added a

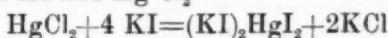
permanent precipitate begins to form, and I consider it highly probable that the reaction which takes place is analogous to that which occurs in testing HCN by what is termed Liebig's process, in which a volumetric solution of  $\text{AgNO}_3$  is added to a weighed quantity of HCN; and when exactly one-half the cyanogen is displaced, and permanent precipitate of  $\text{AgCN}$  commences to form, a soluble double salt is first formed and shown by the precipitate dissolving as fast as it appears until exactly half the solution has been used; the HCN is first made slightly alkaline with  $\text{NaHO}$



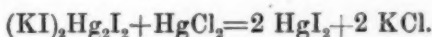
and



and similarly with  $\text{KI}$  and  $\text{Hg Cl}_2$



and



I prefer to make the formation of a permanent precipitate as the finishing point of the process; it is much more sharply defined than the point at which the precipitate ceases to form. Should it be preferred, however, to make use of this latter (and it is useful as a check on the first part of the process) the best way is to take a glass tube open at both ends, about 15 cm. in length and 5 mm. diameter, and to tie over one end a small piece of filtering paper; on moistening this and depressing the tube into the iodide solution, a few drops may be filtered off and transferred (by inverting the tube) to a porcelain slab and small test glass, and a drop of the mercuric solution added; it will then be instantly apparent whether the reaction is complete or not.

I append the result of my experiments with  $\text{KI}$  containing quantities of  $\text{KBr}$ .

Percentage of $\text{KBr}$ in 1 gm $\text{KI}$ .	Precip. commenced.	Precip. ceased.
0	8.0 c.c.	16.0 c.c.
5	7.6 c.c.	15.8 c.c.
10	7.3 c.c.	14.6 c.c.
15	6.8 c.c.	13.6 c.c.
20	6.4 c.c.	12.8 c.c.
25	6.0 c.c.	11.9 c.c.
30	5.7 c.c.	11.3 c.c.



1 gram KI=81 gram HgCl<sub>2</sub>.

In conclusion, I would strongly recommend pharmacists to practice these volumetric processes, for they afford easy means of determining purity in many cases in a few minutes where the ordinary processes take as many hours.—*Pharm. Journ. and Trans.*, Lond. June 28, 1873.

#### SNAKE POISONS.

Twenty thousand people, it is stated, yearly die, in Hindostan alone, from the effects of the bites of venomous serpents. It is a strange fact that this poison, so deadly and virulent in its effects, may be swallowed with impunity. Its action seems to be the complete paralyzation of the nervous centres through the medium of the blood, in which it spreads through the body with lightning rapidity. Applied to the mucous membrane it causes violent local inflammation; and absorption quickly taking place, the symptoms of general poisoning are soon apparent. The effects of the venom depend, first upon the nature of the snake, the quantity and quality of the poison and the circumstances under which the bite is given; second, on the species, size and vigor of the living creature receiving the wound.

M. Fayrer, professor in the Medical College of Calcutta, has recently published a work on the serpents of India, in which, referring to the action of the virus upon the blood, he says that, though he has been unable to detect any change in the appearance of the corpuscles, yet there is no question but that some alteration takes place. In inferior animals the bites of vipers destroy in the blood the coagulating faculty, while, on the other hand, by the venom of colubrines, coagulation after death is not interrupted. Again, when inoculated by the poison of the cobra, the blood immediately coagulates, but remains liquid if the bite be given by the daboia. Experiments made in this country with the rattlesnake show that the effects of its venom upon the human blood are quite apparent. Dr. Burnett, in a paper read some time ago before the Boston Natural History Society, gives an account of a microscopical examination, during which the smallest quantity of poison, taken from the fangs of a large rattlesnake, was presented to blood freshly drawn from the finger. A change was immediately perceived; the corpuscles ceased to run and pile together, and remained stagnant, without any special alteration of structure, and the whole appearance was as though the

vitality of the blood had been suddenly destroyed, exactly as in death from lightning. This agrees, also, with another experiment, performed on a fowl, where the whole mass of the blood appeared quite liquid, having little coagulable power.

Analyses of cobra poison have lately been made by Mr. Henry Armstrong, of London. The matter, extracted from full-grown serpents, was forwarded from India in small vials, and appeared to be a brownish, syrupy liquid; from which, when the vessels were uncorked, a quantity of gas escaped. Examinations were made, first, of the crude substance, second, of the precipitate caused by the addition of alcohol, and finally of the residue obtained by evaporating the filtered spirits, with the following results: The raw poison evaporated with sulphuric acid in *vacuo* deposited a friable mass which contained 43.55 per cent. carbon and 13.43 per cent. nitrogen. The white precipitate dried with sulphuric acid, under similar circumstances, appeared as a pale brown substance, easily pulverized, and leaving, after incineration, a light mineral residuum. It contained 45.3 per cent. carbon and 14.7 per cent. nitrogen, and also 2.5 per cent. of sulphur was determined. The alcoholic solution, similarly evaporated, left a light brown friable mass, composed of 43.04 per cent. carbon, 12.45 per cent. nitrogen, and 7 per cent. hydrogen. It was found impossible to crystallize the poisonous substance, neither water, alcohol, ether, bisulphide of carbon, or any other dissolvent employed leaving the slightest trace of crystals after evaporation. Nitric acid and alcohol determined a coagulum; heat produced the same effect. The salts of copper and potash caused the violet color characteristic of the presence of albuminoid matter.

The liquor, it appeared, resisted decomposition and maintained its activity even after being kept for considerable time, and the characteristics of the poison were noted to be equally powerful in all the three states above mentioned.

M. Fayrer considers that to cobra poison may be ascribed a nature similar to that of vaccine virus, and believes that much may be discovered by extended experiment. He says that viper venom acts directly on the blood and secondarily on the nervous system, and adds that it may be that, by careful and reasonable employment, this powerful poison may be converted into a useful remedy, and that there is nothing to prove why, by extended experiment and study, a complete and prompt antidote may not be found.

From all accounts it appears that the rattlesnake (*crotalus duris-*

*simus*), indigenous to this country, is endowed with a poison even more virulent than that of the cobra or viper. There is reason for belief that its action is the same upon all living things, vegetables as well as animals. It is even fatal to the snake itself; and we find it stated that, on being irritated while confined in a cage, the animal has been known, in moving suddenly, to strike its own body, and to die from the wound as quickly as would any other creature. A remarkable physiological fact is here presented of a liquid, secreted directly from the blood, which proves deadly when introduced into the very source from which it was derived. Serpent poison acting as a powerful sedative, active stimulants are probably the best antidotes. Hence, in parts of the United States infested with venomous reptiles, it is the practice to administer large drafts of whisky, or to chew and swallow tobacco. The liquor stimulates the nervous system until the depressing effect of the poison is overcome by natural curative action. Tincture of iodine externally applied and administered by hypodermic injection into the cellular tissue near the wound is said to be of considerable efficacy, and in advanced cases chloride or iodide of potassium, largely diluted with water, is given in addition. Sucking the wound immediately after being struck often delays the spread of the poison. The negroes in the South favor an odd remedy, which consists in killing a chicken, splitting it in the back, and bending the warm flesh directly over the bite. They believe that the poison attacks the fowl in preference to transfusing itself through the human body. The Mexicans and Indians use a plant which they call *golondrinera*, which Dr. Torrey on examination pronounced a species of *Euphorbium*. Botanically it is known as *E. prostrata*; and we find it described as a plant of frail, delicate appearance, somewhat like the gold thread, and having long, reddish stems that spread and interlace with each other. Its flowers, which appear from April to November, are very small and white, with dark purple throats. They are axillary, and have four petals and four sepals. All parts of the plant contain an abundance of milky juice in which the medicinal properties reside, and which is extracted by bruising the portions in a mortar. A considerable quantity of water is added and several ounces of the mixture administered to the injured person. The plant grows plentifully in dry gravelly places, by roadsides and in farm-yards. The remedy, which acts as an emetic and cathartic, is said never to fail in a cure and to be attended with no danger in its administration.—*Scientific American*, July 19, 1873.

## Varieties.

*A Monument to Liebig.*—The following circular has been issued at Berlin:

COMMITTEE FOR ERECTION OF A LIEBIG MEMORIAL.

Bureau, No. 10 Dorothea St., Berlin.

BERLIN, April 29, 1873.

HONORED SIR,—In its session of April 28th, the directors of the German Chemical Society unanimously decided to honor the memory of Justus Von Liebig by the erection of a statue either in Darmstadt, Giessen, or Munich.

A committee, consisting of the undersigned, was empowered to take the necessary steps to carry out this decision.

In making known to you this decision of the directors of the German Chemical Society, we hasten to inquire of you whether you are disposed to become a member of the general committee for the erection of a Liebig Memorial.

In case of an affirmative answer, which we earnestly request, we will have the honor to send to you, in a few days, the call to be signed.

The Committee.—A. W. Hoffmann, C. A. Martius, O. Scheibler.

This call has since been issued and a large committee appointed, the members residing in different countries.

*Australian Soluble Gums.*—The number of arborescent species of *Acacia* furnishing gum is not inconsiderable. The species indigenous to Australia are of greater celerity of growth than the African gum *Acacias*. Gum a good deal resembling Arabic is obtained from *Acacia harpophylla*, Ferd. Mueller; *A. Bidwillii*, Bentham; *A. pycnantha*, Bentham; *A. decurrens*, Willdenow; and *A. homalophylla*, Cuming. It has been exported for cotton printing, adhesive purposes, and other applications. The supply can be rendered abundant.—*Journ. Appl. Science*, Sept. 1, 1873.

*Indian Opium.*—The poppy being exclusively grown for the Supreme Government of India in Benares and Behar, the permission of the Lieutenant-Governor of Bengal has been sought and obtained on the subject of improving its cultivation. The opium manufactured in the Himalayas contains 50 per cent. more morphia than that of the plains of India. This fact was placed on record in the "Journal of the Agri-Horticultural Society of India."—*Pharm. Journ. (Lond.)*, July 12, 1873.

*Manna, etc., from Palermo.*—From the consular reports we find that the shipments of manna from Palermo were 1345 cwt., valued at £8189, in 1870, and 2530 cwt., valued at £14,642, in 1871. Most of this goes to France. The trade in essences and essential oils also shows a large increase, having risen from 8890 lbs., valued at £1252, in 1870, to 49,800 lbs., valued at £6620, in 1871. There are five manufactories of concentrated lemon juice and essences in that city, which turn out 400 pipes annually.—*Ibid.*

*Cod-Liver Oil Mixture.*—A preparation that has met with much favor, under

the above name, has been made by the writer from a formula given him by Mr. Hassard, of Philadelphia. It is made as follows: R. Fresh eggs, No iv; lemon juice, q. s. Place the eggs in a suitable vessel, and pour over them sufficient lemon juice to cover them, and let the whole remain for 24 or 48 hours. Then pass the whole through a strainer, and add, with agitation, the following, and in the order given: To the lemon juice and eggs add an equal volume of honey, cod-liver oil, and brandy or whisky. The whole forms a permanent emulsion, and will keep good during the summer months for a month, and longer in cooler weather. The taste of the oil can be completely covered by the addition of a few drops of oil of wintergreen, or oil of bitter almonds. This mixture is pleasant to take, and a valuable therapeutic agent.

P. S.—Glycerin may be substituted for the honey.  
—*Cincinnati Lancet and Observer*, Sept., 1873.

E. S. W.

*New and Rapid Process for Generating Sulphuretted Hydrogen.*—W. Skey (*Chemical News*) describes a method which is said to be simple, expeditious and economical, and which has been used by the author for over two years, giving entire satisfaction: Fragments of galena and granulated zinc, in proportions of about 1 to 1, are well mixed and put into a small apparatus of the kind generally in use for the preparation of this gas, and hydrochloric acid diluted with water (1 to 20 or so) poured upon them. Sulphuretted hydrogen is instantly given off, and its evolution is found to proceed energetically, regularly and continuously for a great length of time—a length proportionate to that of the quantity of material used and its proper adjustment as to parts. A little hydrogen accompanies the gas named, and traces of hydrochloric acid. The acid is, however, easily removed by allowing it to pass through a little carbonate of lime before use, while the presence of hydrogen can have no bad effect for all ordinary purposes. After a sufficiency of the gas has been used it is best, in ordinary cases, simply to wash the galena and zinc with water, when the apparatus is ready for further use at a moment's notice; but when quantities are required in rapid succession a form of apparatus may be used which allows the separation of the acid liquid from the undecomposed substances within itself, when the delivery tube is closed.—*Canad. Pharm. Jour.*, 1873, July.

*How does the Color of Flowers Vary?*—An amateur, M. Hueghe, had some primroses which he transplanted into a better soil, and the result was that from yellow the flowers became an intense purple. By a similar modification and by mingling with the soil certain substances, one may vary the color of plants. Charcoal deepens the tints of dahlias, hyacinths and petunias; carbonate reddens hyacinths; and the phosphate of sodium changes in various ways the hues of some plants. It is known that a heathery soil makes the green hydrangea red.—*Journ. Applied Chem.*, September, 1873.

*Certain Constituents of Poplar Buds.*—J. Piccard—Along with chrysin the author has come upon three other bodies—the ethereal oil of poplar  $C_5H_8$ ; a mixture of salicin, popalin and tecto-chrysin,  $C_{16}H_{12}O_4$ , a higher homologue of chrysin.—*Chem. News*, Aug. 22, 1873.



*Loss of Drugs in Powdering.*—The following is copied from a circular of the Philadelphia Drug Exchange issued in June last :

The following table, showing the average losses in weight, in powdering, will probably be found interesting and useful for reference.

It exhibits the results from a number of trials of each article covering a period of several years, and was prepared at one of the drug mills of this city. These losses, as will readily be understood, vary as the dryness of the article varies—

	Per cent.		Per cent.
Acid, Tartaric, . . . . .	$\frac{3}{4}$ to 1	Ginger, African, . . . . .	3
Aconite Root . . . . .	2 to 5	Jamaica, . . . . .	3
Allspice . . . . .	14	Gum Arabic . . . . .	4
Aloes, Cape, . . . . .	6 to 7 $\frac{1}{2}$	Indigo . . . . .	2
Socotrine, . . . . .	8 to 10	Ipecacuanha . . . . .	3 to 4
Alum . . . . .	$\frac{1}{2}$ to 1	Jalap . . . . .	9 to 10
Argols, Red, . . . . .	2 to 3	Lac Dye . . . . .	2
White, . . . . .	$\frac{1}{2}$ to $\frac{3}{4}$ of 1	Liquorice Root	
Assafoetida . . . . .	9 to 11	chipped and bruised	3 to 4
Barberry Bark . . . . .	3	powdered . . . . .	10 to 12
Bayberry Bark . . . . .	4	Liquorice, stick, . . . . .	10
Bean of St. Ignatius . . . . .	1 to 3	Mace . . . . .	1
Benzoin . . . . .	1	Mandrake . . . . .	4 to 5
Black Lead . . . . .	$\frac{1}{2}$ to $\frac{3}{4}$ of 1	Manganese, Black Oxide, . . . . .	1 $\frac{1}{2}$
Bloodroot . . . . .	3 to 4	Mustard . . . . .	6 to 7
Blue Vitriol . . . . .	2	Myrrh . . . . .	8 to 10
Bole, Armenian . . . . .	1	Nut Galls . . . . .	4
Borax . . . . .	$\frac{3}{4}$ of 1	Nux Vomica . . . . .	4 to 5
Buchu . . . . .	3 to 4	Opium . . . . .	18
Butternut Bark . . . . .	3 $\frac{1}{2}$	Orange Peel . . . . .	3 to 5
Calisava Bark . . . . .	3 to 5	Orris Root, powdered, . . . . .	6 to 8
Canella Alba Bark . . . . .	3	Pepper, Black, . . . . .	2 $\frac{1}{2}$
Cantharides, powdered, . . . . .	2 to 3	Poplar Bark . . . . .	1
Capsicum . . . . .	7 to 9	Potassa Prussiate . . . . .	1 $\frac{1}{2}$
Cassia . . . . .	3	Prickly Ash Bark . . . . .	1 to 2
Castile Soap . . . . .	23 to 25	Pumice Stone . . . . .	2 $\frac{1}{2}$
Cloves . . . . .	3	Rhubarb, powdered, . . . . .	3 to 4
Cochineal . . . . .	$\frac{1}{2}$ to 1	Sal Ammoniac . . . . .	1
Colocyath Apple, powdered, . . . . .	4 to 5 $\frac{1}{2}$	Sarsaparilla,	
Copperas, when dried, . . . . .	7	chipped and bruised, . . . . .	4 to 5
Corrosive Sublimate . . . . .	1 $\frac{1}{2}$	finely ground . . . . .	10 to 13
Cream of Tartar . . . . .	$\frac{1}{2}$ to $\frac{3}{4}$ of 1	Scammony . . . . .	4 to 5
Cubebs . . . . .	1 $\frac{1}{2}$	Senna . . . . .	3 to 4
Elm Bark . . . . .	3 to 4	Shellac . . . . .	2 to 3
Ergot . . . . .	2 to 3	Snakeroot, Black . . . . .	3 to 4
Euphorbium . . . . .	$\frac{1}{2}$ to 1	Squills . . . . .	3 to 5
Fenugreek . . . . .	3 to 3 $\frac{1}{2}$	Sulphur . . . . .	1 $\frac{1}{2}$
Flaxseed . . . . .	1 to 2	Valerian . . . . .	3 to 5
Gamboge . . . . .	3 to 4	Vanilla Beans . . . . .	4 to 5
Gentian Root . . . . .	6 to 13	Wild Cherry Bark . . . . .	3 to 5

*Food for Invalids.*—John Goodman, M. D., of Southport, prepares what he calls "artificial fibrin" as a nutritious food for invalids, especially when the stomach rejects other food. He thus describes its preparation. It is formed by exposing albuminous material to the operation or influence of cold water for a given time, and, on account of its great plenteousness, we employ the ordinary hen's egg for its production. When the shell is broken and removed, and

its contents are immersed in cold water for some twelve hours or so, it is found to undergo a chemical molecular change, and to become solid and insoluble. The egg, and fluid in which it is immersed, is now heated to boiling, when the fibrin will be found ready for use.—*Journ. Applied Chem.*, July, 1873.

[ *Anti-Neuralgic Snuff*.—The *Rivista Clinica di Bologna* mentions an anti-neuralgic snuff prescribed with success in cases of facial neuralgia, by Dr. Scriffignano. The base of the snuff is quinine, and its composition as follows: Citrate of quinine, ten grains; very strong exciting snuff (tobacco), fifteen grains. The medicament is said to act almost directly on the diseased nerve through the ethmoidal thread of the nasal ramus of Willis's ophthalmic, a branch of the fifth pair.—*Philada. Med. Times*, Aug. 9, 1873, from *London Lancet*.

*Gilding Iron*.—Sodium amalgam is said to be advantageous as a means of simplifying the method of dry gilding iron, and for painting gold designs thereon.

By simply rubbing with the amalgam, the surfaces of iron and similar metals, although oxidized, are at once amalgamated. Some solution of chloride of gold is then applied quickly on the amalgamated surface, and the mercury volatilized by the heat of a lamp or fire. A very uniform gilding is thus obtained, admitting of high polish. With silver and platinum salts similar results are obtained.—*Jour. Franklin Institute*, Sept., 1873.

*Determination of Chloral*.—V. Meyer and H. Haffter.—The authors remark that chloral hydrate is often found very impure, whence a simple and accurate method for its quantitative examination becomes needful. With aqueous solutions of alkalies chloral hydrate is completely resolved into chloroform and alkaline formiate according to the equation,  $C_2 Cl_3 H_3 O_2 + Na OH = CH Cl_3 + H C O_2 Na + H_2 O$ . 1 equivalent of chloral hydrate neutralizes 1 equivalent of soda, or 165.5 grms. of the former require 1000 c.c. of normal solution of soda. If, therefore, a weighed amount of the sample under examination is mixed with a known excess of normal soda solution, and the remaining excess of soda is determined by titration with standard acid, the soda consumed and the corresponding amount of pure chloral hydrate are found by the equation—

$$x = \frac{(a-b) 165.5}{1000} \text{ grm.}$$

$a$  denoting the number of c.c. of normal soda consumed, and  $b$  the c.c. of normal acid used for titration. If free hydrochloric acid is present as an impurity, it is neutralised by shaking up the aqueous solution with pure carbonate of lime, and expelling the free carbonic acid by prolonged agitation in the measuring cylinder.—*Chem. News (Lond.)*, June 27, 1873.

*On Crystalline Protiodide of Mercury*.—P. Yvon.—This compound is best obtained by heating mercury and iodine in equivalent proportions, in sealed flasks, upon the sand bath. The temperature must not be allowed to exceed 250°. The upper portion of the flask will be found lined with crystals of a fine

red, which become yellow on cooling. On re-heating, the red color begins to return at  $70^{\circ}$ , and at  $220^{\circ}$  a splendid garnet shade is attained. This is exactly the inverse of the phenomena presented, under similar circumstances, by the biniodide. The crystals of protiodide melt at  $290^{\circ}$  to a black liquid, which boils at  $310^{\circ}$ . If more rapidly heated it is decomposed, yielding mercury and a light yellow sublimate, which is not, as might be expected, a compound richer in iodine, but an oxy iodide which may be represented by the formula,  $Hg_{13}O_6I_7 = 6 HgO, 7 HgI$ . This oxy-iodide is at first bright yellow and crystalline, but, especially if exposed to the light, it soon becomes first orange and then brick red, and falls to a powder.—*Chem. News, July 25, from Compt. Rend.*

*Erythrophenic Acid, a New Reaction of Phenol and Aniline.*—E. Jacquemin.—When phenol is treated with chlorine-water, no reaction is observed, and ammonia added to the mixture subsequently develops no coloration. It is known that aniline, on the contrary, suspended in water, with the addition of a solution of chlorine, takes a rose color, which rapidly becomes purple, violet, and, lastly, brownish-red, and that ammonia added at this last juncture increases the brownness. It is no longer the same when a mixture of a drop of phenol and a drop of aniline is submitted to the action of solution of chlorine. A permanent rose-red is obtained, which may be turned to a blue either by ammonia or by the alkalies or alkaline carbonates. Acids restore the original redness. The author concludes that there exists a phenate of phenylamin; that the new body produced in the above reaction is a red acid, forming blue salts; the erythrophenate of soda may be produced by causing hypochlorite of soda to act upon the mixture of phenol and aniline. The blue thus formed is remarkable for its purity and extraordinary tinctorial power. If two drops of the mixture of phenol and aniline be added to 2 litres of water, and then treated with hypochlorite, the blue in an hour or two becomes so intense that it could be recognized even in 4 litres of water. This reaction may be useful in toxicological researches either for aniline or phenol. The purity and permanence of the blue might render it fit for the uses of the dyer, but it will not bear steaming. The extreme facility with which it is reddened by the feeblest acids is likewise an objection. In this respect it far exceeds litmus.—*Chem. News, July 25, from Bull. Soc. Chim. de Paris.*

### Pharmaceutical Colleges and Associations.

THE COLLEGES OF PHARMACY in the United States commence their regular courses with the beginning of October, except the California College, which, as we stated in our last issue, opened its first course in July last. As far as we can learn, there appear to be good prospects for full classes in all the colleges, and it is to be hoped that with the beginning of the cooler season new energy may be infused, not only into the students who come to listen to the teachings of their professors, but likewise into those who are considered members of the pharmaceutical profession.

In many of the colleges, pharmaceutical meetings will be inaugurated again during the present month, and, if the pharmacists know and appreciate the duty they owe to the profession, they will not fail to bring forward, for the benefit of all, such notes, observations and investigations, as they may have been enabled to make during the past six months, or may make during the season before us.

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**BRITISH PHARMACEUTICAL CONFERENCE.**—The annual meeting was held at Bradford, September 16th, simultaneously with the meetings of two other national pharmaceutical societies, that of Austria and North America.

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**THE AUSTRIAN PHARMACEUTICAL ASSOCIATION** held a meeting July 7th, at which Dr. A. Hottot showed his pepsin exhibited at the Vienna Universal Exposition. This pepsin is prepared as follows: Hogs' stomachs are macerated in water, the liquid is filtered, the filtrate precipitated by acetate of lead, the washed precipitate decomposed by sulphuretted hydrogen, and the filtrate, after concentration, precipitated by sulphate of sodium. After having been repeatedly washed with water, pepsin is in small shining scales, of yellowish-grey color, almost inodorous, not hygroscopic, and insoluble in water. If one centigram of this pepsin is digested for one hour, at a temperature of 45° C. (113° F.), together with 30 grams of water, 45 centigrams muriatic acid, spec. grav. 1.18, and 6 grams of fibrin, the latter is dissolved and after 12 hours completely transformed into albuminose, and the liquid yields no precipitate either on boiling or by nitric acid. The same effect is produced, under the same circumstances, using, however, six centigrams of pepsin, upon six grams of recently coagulated albumen.

Mr. E. Delpeches exhibited various preparations of Eucalyptus.

Mr. S. Limousin demonstrated the preparation of oxygen with an apparatus constructed by him, and consisting of a cast-iron retort composed of two hermetically fitting hemispheres. By the heat of a spirit lamp the gas is evolved from a mixture of chlorate of potassium and binoxide of manganese, the gas is washed by passing it through very dilute solution of potassa, and collected in rubber bags. Oxygen gas has been employed lately in cholera hospitals.

Mr. E. Genevois spoke about different blistering plasters.

The annual meeting of this Society was held at Vienna, September 15th and 16th.

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**THE GERMAN APOTHECARIES' UNION** held its annual meeting at the City of Cologne, September 4th and 5th.

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## Editorial Department.

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**BOGUS DIPLOMAS.**—There appears to be a chance for this swindle to be legally checked at last. If we look at the facts that were unearthed about

eighteen months ago (see Amer. Journ. Phar., 1872, 139) by a committee of the Pennsylvania Legislature, it appears strange that the proper prosecuting authorities should have required additional "official" information to institute legal proceedings against a concern which has extensively advertised its diplomas *in absentia*, and the foreign headquarters of which are at 46 King street, Jersey, England, while the home manufactory is located in the City of Philadelphia. At the meeting of the City Councils, held September 9th, a message was presented from Mayor Stokley, in which it was stated that the Consul of Spain had officially brought to his notice the fact that medical diplomas were issued by an institution in this city, styled the "American University of Philadelphia," in a manner apparently illegal and to persons unqualified to receive them. The Mayor recommended the passage of a resolution requesting the Attorney General to sue out a writ of *quo warranto* to test the question and put a stop to the proceeding.

In conformity with this request, a resolution was passed and approved, requesting the Attorney General of the Commonwealth to sue out a writ of *quo warranto* to inquire into the legality of the medical diplomas issued by the institution known as the "American University of Philadelphia."

Attorney General S. E. Dimmick will apply for the writ at the meeting of the Supreme Court in Pittsburgh, October 6th.

"WHAT IS CINCHO QUININE?"—Under this caption an article has been published lately in many medical journals, laudatory of a preparation which has been chemically examined by W. T. Wenzell, of San Francisco, whose results were published in the April number, 1870, of the "Pacific Medical and Surgical Journal," and copied into the July number, 1870, of this journal. For the benefit of our cotemporaries we again copy here the concluding paragraphs of Mr. Wenzell's paper, which will furnish an answer to the above, or rather to the query, *What was cincho-quinine in March, 1870?*

"Cincho-Quinine," although having the advantage of being nearly tasteless, does not contain quinia, quindia, and cinchonidia, and therefore does not represent the whole of the active principles of the bark.

It cannot exert the full effects of sulphate of quinia in the same dose, inasmuch as the stated dose of "Cincho-Quinine" is from five to thirty grains.

Although "Cincho-Quinine" appears to cost less than sulphate of quinia, it does not follow that commercial "Cinchonia," sold at four times its value, is a desirable substitute for quinine in an economical point of view.

And, lastly, one very important principle should by no means be lost sight of, namely: that a physician should always know what he is prescribing, and therefore the substitution of a remedy of less efficiency and uncertain medicinal value, is altogether unwarrantable and often hazardous.

THE EXCURSIONS TO AND FROM THE RICHMOND MEETING OF THE AMERICAN PHARMACEUTICAL ASSOCIATION were participated in by a larger number of members than those to any previous meeting. The excursion party, which left Cincinnati on Saturday, September 13th, was unfortunately detained upon the Ohio river by low water, and could not, for this reason, make the railroad connections in time to carry out the original programme of spending Sunday at White Sulphur Springs and reach Richmond Monday evening. The excu-



sions arranged for the Eastern members were more successful, although ten or twelve failed to join the main party, having been detained in Long Island Sound by foggy weather. The steamer *George Leary*, which left Baltimore for Norfolk on the afternoon of Saturday, September 13th, carried a party of fifty-five ladies and gentlemen, who received every attention by the officers of the Bay Line steamers, as they proceeded down the Chesapeake Bay, and early on Sunday morning passed Fortress Monroe and up Hampton Roads to Portsmouth and Norfolk, in which latter city they were to await the arrival of the steamer from New York. On Sunday afternoon the officers of the Bay Line steamers placed a tug-boat at the disposal of the party, and various points of interest in the neighborhood were visited, among them the celebrated Gosport navy yard. Soon after the party had landed again at the wharves of the Bay Line steamers the "*Old Dominion*" neared her landing-place, carrying a party of forty-nine ladies and gentlemen, bound for Richmond, to attend the meeting. Owing to an accident to the machinery of the James River steamer, which was to take the party coming from Baltimore to Richmond, the passengers were transferred to the *Old Dominion*, which vessel proceeded again, early on Monday, upon her voyage up the James River, passing numerous points of interest in the history of the State of Virginia, as well as of national importance.

It was shortly before dusk, a few miles below, but in full sight of the City of Richmond, when the *Old Dominion* was met by two barges, with a portion of the Committee of Reception of the Richmond pharmacists and druggists, headed by the Chairman, Mr. T. Roberts Baker. The barges landed the combined party at Rocketts, where omnibuses and carriages were in waiting to convey them to the "*Exchange Hotel and Ballard House*," which establishment had been selected as the headquarters of the members during their stay in Richmond.

With unbounded liberality, the friends of the Association had placed carriages at the disposal of the members and their families during their stay in Richmond, and members of the Reception Committee were constantly in attendance to point out the historical and most beautiful localities in and around the city, and to accompany the ladies and members as guides.

On Thursday afternoon, the members of the Association and the exhibitors at the meeting, with their ladies, by invitation of the Richmond druggists, embarked at Rocketts upon the barge *Greenbush*, to which were attached the steam-tugs *Frank Somers* and *W. P. Craighill*, which were handsomely decorated with the colors of the United States and of other nations. Nearly every pharmaceutical establishment of the city was represented on board. His Honor, Mayor Keiley, the Faculty of Virginia Medical College, and a number of prominent physicians and citizens were present, and accompanied the party upon the excursion down the James River. Powhatan, Drury's Bluff, Chaffin's Bluff and many other historic places, made famous during the early and more recent history of Virginia, were pointed out, and many incidents in connection therewith related. The boats passed through the Dutch Gap Canal, then turned in the river, and again proceeded back towards the city. Mayor Keiley being called upon for a speech, addressed the company, recalling some incidents

of the war, and congratulating those present, representing most of the States and all the sections of the reunited Union, upon the happy occasion which brought them together. In language of elegance and eloquence he alluded to the old flag, and the men of Massachusetts and Virginia now again working together in fraternal accord for the good of the whole country. Speeches were also made by Mr. James Slade, of Boston; Dr. C. A. Tufts, of Dover, N. H.; Prof. G. F. H. Markoe, of Boston; Rev. Dr. C. C. Bitting, and Prof. J. B. McCaw, of Richmond; Messrs. J. F. Hancock, of Baltimore; H. A. Vogelbach and J. M. Maisch, of Philadelphia. In the course of his remarks, Mr. Vogelbach read a series of resolutions passed by the party that came to Richmond via Baltimore, by the steamer *George Leary*, returning thanks to the officers of the Bay Line for kindnesses bestowed upon them, and to Mr. Hancock for the preparations made by him to ensure a pleasant voyage. The trip was enlivened by music from the First Regiment band, and by singing by a quartette of Richmond amateurs. A handsome collation was served, and the excursion terminated pleasantly in every respect at about 8½ o'clock, when the boats reached Rocketts again, to land the delighted excursionists.

For the same evening a hop had been arranged in the ball-room of the hotel, and a number of couples amused themselves by dancing to the music of a good string band.

After the final adjournment of the meeting, on Friday noon, quite a number of members visited Petersburg, with its remaining fortifications, and in the evening many left, northward bound, to visit on Saturday the public institutions of the National Capital, while most of the Western members travelled homeward, with the intention of spending a day or two at White Sulphur Springs, a pleasure of which they had been deprived on their eastward trip by the failure of making timely connection with the train at Huntington, W. Va.

Nearly the whole of the remaining members left Richmond in the early train on Saturday morning, paid a visit to Mt. Vernon, and reached Washington, D. C., by the steamer *Arrow*, at about five o'clock P. M.

Thus ended one of the most pleasant reunions of the American Pharmaceutical Association, at which the members and their families were the recipients of old Virginia hospitality, so renowned throughout the country. Arriving in the City of the Seven Hills almost entire strangers, the unbounded cordiality, the open-hearted liberality, and the fraternal welcome of its pharmacists, druggists and citizens in general soon made every one feel at home, and the remembrance of the week so pleasantly spent on the beautiful banks of the James River will not soon be effaced from the memory of those who attended that meeting, at which the Association—as Mayor Keiley pleasantly remarked—attained its majority, and celebrated its twenty-first birth-day.

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THE FOURTH CONVENTION OF THE TEACHING COLLEGES OF PHARMACY assembled at the Exchange Hotel, in the City of Richmond, Va., on the evening of September 17th. Delegates were present from the Massachusetts, New York, Philadelphia, Maryland, National (at Washington, D. C.), Cincinnati, Chicago, Louisville and Tennessee Colleges. Dr. C. A. Tufts was re-elected President, and J. M. Maisch Secretary of the convention. After arranging some financial

matters, the subject of examination of the students preceding their admission to the colleges was discussed at considerable length. The large majority of the delegates and of the colleges represented favored the views of the convention of 1870, and the subject was laid on the table.

A proposition for the adoption of an uniform code of ethics by the convention of teaching colleges was discussed and, before final action was had, withdrawn. During a discussion on the requirements for graduation it was observed that all the colleges of pharmacy require sufficient experience in a retail store and behind the prescription counter, and bestow their diplomas only after the applicants have served four years in the business, attended two full courses of lectures, and passed a satisfactory examination.

A second session was held on the evening of September 18th, during which pharmaceutical titles were the subject of discussion. A proposition to have the records of the various conferences published and distributed among the colleges was referred to the various colleges for action, the delegates to report at the next convention, to be held at Louisville.

THE EXPOSITION OF OBJECTS RELATING TO PHARMACY at the Richmond meeting was a very creditable and interesting one, and was visited not only by the pharmacists present at the meeting, but also by the members of the medical profession and by many citizens, particularly on the evening of September 17th, when the public had been specially invited.

Collections of *chemicals* were exhibited by Powers & Weightman, Rosengarten & Sons, Chas. T. White & Co., J. Creuse, and others; *crude drugs* by B. O. & G. C. Wilson (pressed medicinal herbs, flowers, &c.), Wallace Bros. & Stevenson, of Statesville, N. C. (fresh medicinal plants, roots, barks, leaves, &c.), McKesson & Robbins, Lazell Marsh & Gardiner, Dr. Squibb, H. T. Fraeueff, of Columbia, Pa. (Glitsch's Russian Mustard), and others; *pharmaceutical preparations*, of various kinds, by Hance Bros. & White, Bullock & Creusshaw, W. R. Warner & Co., Sharp & Dohme, McKesson & Robbins, W. H. Onderdonk, O. Neustadt & Co., and others. Mr. Ira Blunt exhibited Valentine's meat juice, containing albumen in solution, and Sherwood's patent bottle-filler; Thomas H. Hazard, extract of meat; E. F. Houghton & Co., cosmolin, and various ointments prepared with it; Keasby & Mattison, granular effervescent salts; Dr. E. R. Squibb, physicians' pocket-cases and an apparatus-stand of his construction; McKesson & Robbins, Neynaber's patent pharmaceutical steam apparatus; John W. Shedden, dyspeptic flour, and water from the Massena springs, N. Y.; Janentzky & Co., water and oil colors, hair pencils, &c.; Waters & Ricksecker, druggists' sundries; W. B. Burk & Co., corks, sponges, &c.; Oscar G. Cosby, model of an invalid bed; J. B. Lippincott & Co., Cooley's Hand-book of Compound Medicines; Hand-book of Perfumes, Cosmetics and other Toilet Articles; U. S. Pharmacopœia; the American Pharmaceutical Association, Report of Columbia Hospital for Women, and Medical and Surgical History of the War of the Rebellion, presented by the Departments in Washington; Whitall Tatum & Co., glassware of various kinds; Dr. W. H. Pile, hydrometers of his own make. Wines and brandies were exhibited by Eberhardt, Lachman & Co., and by Good, Roof & Co.